ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

PROFESSIONAL SERVICES GUIDE

GUIDE FOR FIRMS PERFORMING ARCHITECT AND ENGINEERING (A&E) AND OTHER PROFESSIONAL SERVICES FOR THE ATLANTIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND

JUNE 2000

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CONTENTS

Important Note to Users:

This document contains links to guidance and criteria that are maintained on other web pages. This document is intended to be the guiding document that allows access to this additional criteria. This document will be updated on a one year cycle. It is the Firm's responsibility to use the latest version of the linked documents at the time the services are actually being performed. Any contractual questions on the use of this guide should be referred to the Contracting Officer on your individual contract with LANTNAVFACENGCOM.

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INTRODUCTION

This ***Guide for Firms performing Architect and Engineering (A&E) and Other Professional Services for the Atlantic Division, Naval Facilities Engineering Command (Professional Services Guide), June 2000*** supercedes the Professional Services Guide dated June 1999. This guide is provided via the Internet on the World Wide Web at http//www.efdlant.navfac.navy.mil, the home page of the Atlantic Division, Naval Facilities Engineering Command. The Internet compatible format was chosen to make the document interactive, more flexible, and easier to update and establish links when referencing Navy policy or other source documents.

This Professional Services Guide provides general guidance for any firm performing professional services for the Atlantic Division, Naval Facilities Engineering Command. Within this basic document are links to numerous sites within the command web page and to other related sites. *It will be the professional firm's responsibility to use the latest version of all linked documents at the time the services are performed.*

It is essential that all personnel and associates providing professional services to the Atlantic Division, Naval Facilities Engineering Command, follow all procedures and instructions outlined herein. Work of the professional firm will be reviewed by the Atlantic Division, Naval Facilities Engineering Command, only to the extent necessary to establish conformance with authorized scope and applicable Navy criteria, and to establish reasonable assurance that the work can be completed within authorized funds. The professional firm shall accept full responsibility for the technical accuracy and professional quality of all work and materials that are furnished under contract with the Atlantic Division, Naval Facilities Engineering Command.

Atlantic Division, Naval Facilities Engineering Command, practices a quality philosophy which promotes teamwork and partnership with our clients and suppliers and emphasizes continuous improvement, innovation, and client satisfaction. All professional firms are encouraged to adopt and apply these principles and to work in partnership with us to provide quality facilities for our mutual benefit.

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MAILING ADDRESS

All correspondence and submittals shall be addressed to:

Commander,
Atlantic Division, Naval Facilities Engineering Command
(Attention: *Name, Code* _____)
1510 Gilbert Street
Norfolk, Virginia 23511-2699

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GLOSSARY

- A&E: An architectural firm, and engineering firm, or an architectural and engineering firm engaged for design services.
- AIA: American Institute of Architects
- Appendix A: The document that defines the A&E's detailed scope of work to include amount of construction funds available, activity points of contact, schedules for submittals, etc.
- Architect or Engineer in Charge (AIC / EIC): The individual within LANTNAVFACENGCOM who is designated as the point of contact on technical matters.

- BBS: Bulletin Board System
- Best Value Source Selection: Selection process in which the successful proposal contains the combination of criteria offering the best overall value to the Government, and is determined most advantageous to the Government when all factors are considered.
- BFR: Basic Facility Requirement is the approved size of the facility as approved and reviewed through the audit.

- CADD: Computer Aided Design and Drafting
- CMC: Commandant Marine Corps
- CNO: Chief of Naval Operations
- Code: Work Center designation for the various divisions and branches within LANTNAVFACENGCOM, such as Code ACQ (Contracts), Code CI3, (Construction), Code MLA (Mid-Atlantic Operations-Hampton Roads/Iceland Integrated Product Team), Code EV (Environmental.)
- COE: Corps of Engineers
- COMNAVMEDCOM: Commander, Naval Medical Command
- Contract Specialist (CS): The individual within the Contracts Office who is responsible to ensure that regulations, laws and procedures are complied with in the award of a contract.
- Contracting Officer: The Commander, Atlantic Division, Naval Facilities Engineering Command or the Commander's designee. Only Contracting Officer's are authorized to enter into, modify and/or terminate contracts, issue final decisions on contract disputes, and assign responsibility for conducting negotiations.

- Design/Build: Projects which require the Contractor to complete all or portions of the project design, and construct the project in accordance with the approved construction documents.
- DMFO: Defense Medical Facilities Officer (DOD Medical Projects)
- DOD: Department of Defense
- DODDS: Department of Defense Dependant Schools

- EBS: Electronic Bid Solicitation
- EFA: Engineering Field Activity such as EFA Mediterranean (ENGFLDACT MED) and EFA Chesapeake (ENGFLDACT CHES).
- EFD: Engineering Field Division such as LANTNAVFACENGCOM or NORTHNAVFACENGCOM.
- Engineering and Design Division: The department within LANTNAVFACENGCOM responsible for technical review and coordination of all A&E construction contract documents.

- ES: Engineering Services

- FACD: Function Analysis Concept Development
- FAR: Federal Acquisition Regulations
- FPD: Facility Planning Document is the display of the BFR, existing assets and planning actions from the Shore Facilities Planning System (SFPS) that supports a project.
- FSC: Facility Support Contract. Contract for Operation and Maintenance of facilities or equipment.

- LANTNAVFACENGCOM: Atlantic Division, Naval Facilities Engineering Command, Norfolk, Virginia, often referred to as "LANTDIV".

- MCON: Military Construction – Navy
- MILCON: Military Construction – DOD
- MIL-HDBK: Military Handbook

- NAVFACENGCOM: Naval Facilities Engineering Command, headquarters in Washington Navy Yard, Washington, DC (formerly located in Alexandria, VA), often referred to as "NAVFAC".
- NFADB: Naval Facilities Assets Data Base is the official repository of facility information for the US Navy. It contains building information used in the planning process.

- OICC: Officer in Charge of Construction
- OMSI: Operation and Maintenance Support Information

- PCAS: Post Construction Award Support. All design related costs that are charged after the award of the construction contract. Examples: review of shop drawings, preparation of as-built drawings, OMSI, design changes, etc.
- PCE: Parametric Cost Estimate
- PIC: Planner in Charge
- Project Manager (PM): The individual within the Acquisition Department of LANTNAVFACENGCOM who serves as the liaison between the A&E and the Contracting Officer. Unless specifically directed otherwise, all contracts between the A&E and LANTNAVFACENGCOM will be conducted through the assigned PM. Variations to this standard procedure will be handled by special instructions prior to negotiation and award of the contract. The PM is not authorized to modify the terms (scope/ price/ schedule of performance) of a contract.

- ROICC: Resident Officer in Charge of Construction, at a specific station or facility designated by the Contracting Officer. He/she is responsible for the field administration of construction contracts.

- SFPS: The Shore Facilities Planning System is an electronic database that uses the facility assets and requirements to provide a basis for planning.
- Source Selection: A method of procurement to pre-qualify contractors and/or A&Es to compete for contracts.

Contractual Requirements

"Please notify the coordinator of this section of the Professional Services Guide with any comments, concerns, or errors, by email: Contracts Point of Contact."

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• Technical Representatives

• Contracting Officer's Technical Representative (COTR) and Navy Technical Representative (NTR)

The COTR and NTR will act as the Contracting Officer's representatives for technical matters providing technical direction and discussion as necessary with respect to the specification or statement of work, and monitoring the progress and quality of contractor performance. The COTR and NTR are not Administrative Contracting Officers and do not have authority to take any action, either directly or indirectly, that would change the pricing, quantity, place of performance, delivery schedule, or any other terms and conditions of the contract; or to direct the accomplishment of effort which goes beyond the scope of the statement of work in the contract.

When, in the opinion of the contractor, the COTR and NTR request effort outside the existing scope of the contract, the contractor shall promptly notify the Contracting Officer in writing. No action shall be taken by the contractor under such direction until the Contracting Officer has issued a modification to the contract or has otherwise resolved the issue.

Copies of all contract correspondence (without enclosures) are to be provided to the COTR and the Contract Specialist.

• A&E Invoicing Procedures

• Payment Policy

It is the LANTNAVFACENGCOM policy to process partial payments at significant stages of work completion identified in the contractual Appendix A project scope. Payment requests are generally processed concurrent with a review submittal (i.e., concept, 35%, 1`prefinal, final, etc.) required by the Appendix A. Partial payments may be submitted and processed for work other than scheduled review submittals when accompanied by adequate evidence of progress.

• Payment Requests

Invoices are processed by the Contract Support Branch (Code 0222) Invoice Accounting Technicians. Contracts ending with an odd number (i.e., 1111) will be processed by Code 0222BW, and those ending with an even number (i.e., 1112) will be processed by Code 0222JR.

Payment requests are to be submitted utilizing the Contractor's Invoice (NAVFAC Form 7300/41 (Rev 7/85)) accompanied by the Contractor Performance Statement (LANTDIV NORVA Form 4-7300/21 (New 1-98)). Submit only one (1) copy of each form**.**

Submit all invoices to the address shown below:

COMMANDER
ATTN CODE 0222BW or CODE 0222JR
LANTNAVFACENGCOM
1510 GILBERT ST
NORFOLK VA 23511-2699

Prior to submitting an invoice package for payment, supporting progress submittals must have been forwarded to the cognizant Project Manager (PM). Progress submittals are the evidence supporting the work has been completed (i.e., copy of plans, studies, reports, field notes, minutes of meetings held).

Upon receipt of the Contractor's Invoice/Contractor Performance Statement, the Invoice Accounting Technician initiates action to the appropriate PM and/or Architect-in-Charge (AIC)/Engineer-in-Charge (EIC)/Planner-in-Charge (PIC) for validation that the work being invoiced has been completed satisfactorily. Subsequent to confirmation from the PM and/or AIC/EIC/PIC that the Contractor has met the terms of the contract Appendix A, the invoice is submitted for payment. In the event payment has been denied by technical personnel, written notification with justification of payment denial is forwarded to the Contractor.

The entire invoice process has a 30 calendar day allowance for completion beginning with the date the invoice is received by Code 0222, and ending with the date the check is issued to the Contractor (excludes mailing time). Telephone inquiries regarding the status of an invoice may be made approximately 36 calendar days after submittal as follows:

Code 02234: Telephone 757-322-8273

Code 02238: Telephone 757-322-8277

Instructions for completion of the invoice forms along with sample formats are provided herein. To avoid time delays and/or return of an incomplete package, invoices must be submitted as instructed. Any additional questions you have involving the completion of the invoice forms may be directed to the appropriate Invoice Accounting Technician at the telephone number listed above.

- ## INVOICE SUBMISSION INSTRUCTIONS

Detailed clarification is outlined on the sample formats provided herein for both the Contractor's Invoice and the Contractor Performance Statement forms. The following briefly identifies mandatory information required to successfully process the invoice package:

CONTRACTOR'S INVOICE

Must identify a point of contact and telephone number

Must have an original signature

CONTRACT PERFORMANCE STATEMENT

a. Modifications to Contracts and Contract Task Orders are to be identified as separate "line items" and will be handled as such. List dollar figures separately

and DO NOT include these figures in the original Contract or Contract Task Order value.

b. A&E Contract Number and Modification Number; and Contract Task Order and Modification to Contract Task Order Number are REQUIRED.

c. Each line item (from columns (3), (4), (5), (6) and (7)) MUST BE extended and totaled at the bottom.

d. A Contractor Performance Statement must be provided totaling those line items identified in the contract actions and/or as shown on the Appendix A schedule of fees (i.e., direct design, engineering services, travel and subsistence, etc.).

A separate Contractor Performance Statement shall be submitted identifying line item specifics. This Contractor Performance Statement shall detail all the services required by the contract line item; e.g., engineering services shall be further broken down to identify field investigation, soil borings, survey/plotting, rendering, etc.

e. The final sheet of the Contractor Performance Statement MUST INDICATE the contract grand totals as they correspond to the Contractor's Invoice.

Total Cost - Column (3): Total value of the Contract including all executed Modifications, Contract Task Orders and Modifications to Contract Task Orders.

Percentage Complete - Column (4): Percentage of all work completed for the total contract value.

Value of Completed Performance - Column (5): Total dollar value of the percentage of work completed in Column (4).

Prior Report - Column (6): Total Dollar Value Paid to Date

Current Report - Column (7): Total Dollar Amount being requested by this Invoice

- **FINAL PAYMENT INSTRUCTIONS**

Completion of all contractually obligated work and confirmation that no further work will be added to the contract, constitutes submittal of a final invoice. In addition to the invoice package identified above, a Contractor's Release (NAVFAC 4330/7 (6-72)) (2 copies with original signatures) must accompany your invoice for final payment. Final payment will not be processed without receipt of this form.

- **INSTRUCTIONS FOR COMPLETING CONTRACTOR'S INVOICE NAVFAC 7300/41 (REV 7/85)**

(Numbers in parenthesis correspond to the form)

(1) Date Initiated (Submitted)

(2) Invoice Number

Assign Invoice Numbers chronologically (i.e., 0001, 0002, 0003, etc.). If a previous invoice has been denied payment, use the next sequential unused Invoice Number. Do not reuse the denied Invoice Number.

(3) Firm Identification

Firms may use this space for their identification symbols for internal tracking.

(4) Complete Name and Address of the firm **as shown on the contract document**.

In parenthesis following the complete name of the firm, provide a firm point of contact (POC) for the invoice action with that individual's telephone number.

In the event that the firm has moved since the execution of the contract, a formal request for a change of address signed by a firm official must accompany the invoice. Upon receipt of this request, an administrative contract modification will be issued changing the contractor address.

(5) Contract Number

(6) Total Dollar Value of the Contract

This figure represents the **total value** of the Contract including all **executed** Modifications, Contract Task Orders and Modifications to Contract Task Orders.

(7) Percentage of Performance Complete

This figure represents the percentage of all work completed for the **total contract value**.

(8) Value of Completed Performance

This figure represents the total dollar value of the percentage of work completed in (7) above.

(9) Total Dollar Value **Paid** to Date

(10) Total Dollar Amount being requested by this Invoice

(11) **Original** signature of Company Official

(12) Typed Name and Title of Company Official

NAVFAC 7300/41 (7/85)

NAVAL FACILITIES ENGINEERING COMMAND
CONTRACTORS INVOICE

INVOICE DATE **(1)** January 1, 1998

INVOICE NUMBER **(2)** 0001
(3) 123:BLM

FROM: **(4)** ABC Corporation (POC: Mr. J. D. Doe/757-333-9999)
123 Main Street, Virginia Beach, Virginia 23451

TO: Officer in Charge of Construction
VIA: Resident Officer in Charge of Construction

1. Below is a Statement of Performance under Contract **(5)** N62470-98-D-0001 at (Station) _____

The enclosure provides breakdown of this statement of performance.

A.	Total value of contract through change _____	$**(6)** 694,766
B.	Percentage of performance complete	**(7)** 79 %
C.	Value of completed performance	$**(8)** 547,408
D.	Less: Total of prior invoices	$**(9)** 453,741
E.	Amount of this invoice	$**(10)** 93,667

Signature and Title **(11)** _____
(12) J. D. DOE, P. E., President

FIRST ENDORSEMENT Date _____
FROM: ROICC _____
TO: _____

1. Payment is recommended as follows:
   - A. Amount of work completed to _____ $_____
   - B. Less: Total of prior invoices $_____
   - C. Amount of this invoice $_____
   - D. Less: Retention this invoice $_____
     (0 to 10% of Item C) $_____
     Total retention prior invoices $_____
     Other deductions $_____ $_____
   - E. Sub-total $_____
   - F. Less previous payments $_____
   - G. Recommended amount for _____ payment $_____

2. Elapsed contract time _____%

3. Signature and Title _____
[1]ROICC

Pursuant to authority vested in me, I certify that this invoice is correct and proper for payment.

DATE _____ Signature and Title _____
[1]Authorized Certifying Officer

ACRN	APPN/SUBHEAD	OC	BCN	SA	AAA	TT	PAA	COST CODE	AMOUNT

[1]If the ability to certify and authority to recommend are combined in one person, one signature only is necessary; otherwise the ROICC will sign in the space provided.

S/M 0105-LF-003-0205

- **INSTRUCTIONS FOR COMPLETING CONTRACTOR PERFORMANCE STATEMENT LANTDIV NORVA 4-7300/21 (NEW 1/98)**

(Numbers in parenthesis correspond to the form)

- **Header Information**

(1) Contract Number

(2) Sheet Number(s)

(3) Period Ending

- **Column Information**

(1) Contract Action Number

This number represents the actual contract action; i.e., Award, Modification, Contract Task Order or Modification to Contract Task Order as shown on the actual contractual document

(2) Description of Line Item Services

The line items displayed in this column should correspond to the line items identified in the contract actions and/or as shown on the Appendix A schedule of fees. (link required to one sample)

A separate Contractor Performance Statement shall further detail all the services required by the contract line item; e.g., engineering services shall be further broken down to identify field investigation, soil borings, survey/plotting, rendering, etc. (link required to second sample)

(3) Total Dollar Amount of Negotiated Line Item

(4) Percentage of Work Completion including the Work being Invoiced

(5) Total Dollar Amount of Work Completed including the Work being Invoiced

(6) Total Dollar Amount Paid Prior to this Invoice

(7) Total Dollar Amount being requested by this Invoice

CONTRACTOR PERFORMANCE STATEMENT

LANTDIV NORVA 4-7300/21 (New 1-98)

CONTRACT # **(1)** N62470-98-D-0001

SHEET **(2)** 2 OF 2

PERIOD ENDING **(3)** 30 September 1997

TO BE COMPLETED BY CONTRACTOR

CONTRACT ACTION NUMBER	DESCRIPTION OF LINE ITEM SERVICES	TOTAL CONTRACT ACTION COST	% COMPL	VALUE OF COMPLETED PERFORMANCE	PRIOR REPORT	CURRENT REPORT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0001	Engineering Services					
	Site Survey	6,473	100%	6,473	6,473	
	Field Support and Summary Report	25,587	100%	25,587	25,587	
	Preparation, Meetings	3,782	100%	3,782	3,782	
	Travel and Subsistence	6,881	100%	6,881	6,881	
0001-01	Direct Design	120,771	34%	41,062		41,062
	Engineering Services					
	Predesign Meeting	11,896	100%	11,896	11,896	
	35% Presentation and Review Meeting/Field Investigation	10,491				
	Communication and Fax	1,320	50%	660	660	
	Printing	4,675	35%	1,636	1,636	
	Travel and Subsistence	26,720	69%	18,440	440	18,000
	Shop Drawing Review	22,800				
	As-Built Drawing Preparation	5,556				
0002	Direct Design	371,344	100%	371,344	352,777	18,567
	Engineering Services					
	Topographic Survey	5,280	100%	5,280	5,280	
	Soil Report	10,725	100%	10,725	10,725	
	35% Review Meeting	15,535	100%	15,535	15,535	
	Exterior Architectural Submittal	2,461	100%	2,461	2,461	
	Structural Certification	6,270	100%	6,270	5,957	313
	Energy Analysis	4,055	50%	2,027		2,027
	Printing	10,970	60%	6,582	3,291	3,291
	Travel and Subsistence	20,814	50%	10,407		10,407
TOTALS		$694,766	79%	$547,408	$543,746	$93,667

REMARKS

- **INSTRUCTIONS FOR COMPLETING CONTRACTOR'S RELEASE NAVFAC 4330/7 (REV 6/72)**

(Numbers in parenthesis correspond to the form)

(1) Contract Number

(2) Total Dollar Value of the Contract

This figure represents the **total value** of the Contract including all **executed** Modifications, Contract Task Orders and Modifications to Contract Task Orders.

(3) Total Dollar Value **Paid** to Date

(4) Total Dollar Amount to be paid by Final Invoice

(5) Date of Final Release Execution by Company Official

(6) Complete Name of the firm **as shown on the contract document**.

(7) **Original** signature of Company Official

(8) Typed Title of Company Official

(9) **Original** signature of Witnesses

In the event the Company is not Incorporated, two witnesses are required

(10) Certifiicate

If the Company is Incorporated, the Secretary of the Corporation must sign the final release and affix the Corporate Seal.

CONTRACTOR'S RELEASE

NAVFAC 4330/7 (6-72)

S/N 0105-LF-001-9100

CONTRACTOR'S RELEASE UNDER CONTRACT **(1)** N62470-98-D-0001

KNOW ALL MEN BY THESE PRESENTS: In consideration of the premise and the sum of **(2)** Six hundred ninety-four thousand seven hundred sixty-six and 00/100 dollars $ 694,766.00 lawful money of the United States of America (hereinafter called the "Government") **(3)** Five hundred forty-seven thousand four hundred eight and 00/100 dollars $ 546,408.00 of which has already been paid and **(4)** One hundred forty-seven thousand three hundred fifty-eight and 00/100 dollars $ 147,358.00 of which is to be paid by the Government under the abovementioned contract, the undersigned contractor does, and by the receipt of said sum shall, for itself, its successors and assigns, remise, release and forever discharge the Government, its officers, agents and employees, of and from all liabilities, obligations and claims whatsoever in law and in equity under or arising out of said contract.

IN WITNESS WHEREOF, this release has been executed this **(5)** day of _____ 19 ____

WITNESSES: **(6)**

(Contractor)

(9)

_____ BY: **(7)**

_____ TITLE: **(8)**

NOTE: In case of a corporation, witnesses are not required, but certificate (below) must be completed.

CERTIFICATE

I, **(10)**, certify that I am the _____ secretary of the corporation named as Contractor in the foregoing release; that _____ who signed said release on behalf of the Contractor was then _____ of said corporation; that said release was duly signed for and in behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

(Corporate Seal) _____

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Design and Related Services

"Please notify the coordinator of this section of the Professional Services Guide with any comments, concerns, or errors, by email: Design Point of Contact (mailto:GuidePOC04@efdlant.navfac.navy.mil.)"

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• Engineering and Design Division Director's Comments

Innovative * Client Focused * Quality Designs

The proper management of any organization's processes is crucial to achieving quality delivery systems. One of the Command's most important processes is the delivery of contract plans and specifications. Our Command, and the engineers/architects who provide professional services for us, have seen this delivery process change substantially over the past few years. This Guide provides the most current information available for design and related services for the Atlantic Division, Naval Facilities Engineering Command. Engineering is a stable profession, but the design process is dynamic, and with the Internet and rapidly advancing technology, response to change must be even faster and better. We hope this Guide meets this requirement. Please feel free to send us comments so that we may improve its usefulness.

This updated Guide includes the new Electronic Bid Solicitation (EBS) information. We have done extensive work in signature software development and provided training on this electronic tool to our A&Es to assist them in meeting our new electronic requirements. Additionally, we have established policy documents that are referenced in this Guide in order for our A&Es to provide the proper submittals to LANTNAVFACENGCOM. A&Es must invest in new technology and become proficient in the tools to provide this new format for our design products.

Continued emphasis is on Sustainable Design and Design/Build, and although quality is not a buzzword, we still recognize it as the primary element that can not be compromised in the design process. Sustainable Design is the innovative concept in building design. What we build today impacts the environment of tomorrow. Design/Build (D/B) connects to the moving world of faster procurement and creative design techniques. A&Es will provide a "scope of services" for the D/B contractors in lieu of the traditional "plans and spec" package, or may participate as a member of the D/B team. Look to our Engineering and Design Division Homepage at http://www.efdlant.navfac.navy.mil/lantops_04/home.htm for additional information.

A final word on Quality: The Engineering and Design Division is committed to Design Quality Control. Design Quality is our top priority and is the responsibility of the A&E firm. To achieve our quality goal we:

- Expect professional performance from A&Es.
- Insist on preferred client status.
- Require A&Es to document and implement their own Quality Assurance Plan.
- Insist on attention to details.
- Strive for technical, functional, aesthetic and environmentally compatible design solutions responsive to client needs and expectations, which provide a realistic project in terms of constructability and cost.

We appreciate the support of the A&E Community toward the achievement of our goals, and the commitment to design excellence for our Navy and DoD clients.

Introduction

Design Guides and Policy Documents

The individual design guides provide information on criteria, field investigation, basis of design, calculations, drawings, specifications and submittal requirements. The design guides and policy documents reside on the Engineering and Design Division home page at http://www.efdlant.navfac.navy.mil/lantops_04/designguides.htm. It is the designer's responsibility to ensure that they have the latest information available for each discipline prior to starting the design and during the course of the design. The following is a list of all available design guides and policy documents:

- Environmental Design Guide
- Civil Engineering Design Guide
- Geotechnical Design Guide
- Landscape Design Guide
- Architectural Design Guide
- Interior Design Guide
- Structural Engineering Design Guide
- Mechanical Engineering Design Guide
- Electrical Engineering Design Guide
- Fire Protection and Safety Design Guide
- Specifications Guide
- Cost Engineering Guide

- LANTDIV Electronic Bid Solicitation (EBS) – Manual of Policies and Procedures
- Metric Design Policy
- 1391+ and PCE Guidance Document
- Value Engineering (VE), Function Analysis Concept Development (FACD), and Design Charette Guide
- Procedures for Obtaining Construction and Operation Permits for Facilities
- Policy for Effective Employment of Design/Build
- AE Review Policy
- Sustainable Design

Philosophy

Prior to commencing design, the Architect-Engineering Firm (A&E) should become thoroughly familiar with current design criteria, standard methods/procedures, guides, specifications, project site conditions, project costs and specific project requirements. Generally, a pre-negotiation conference will be conducted on all military construction funded projects and on other projects of significant magnitude or complexity where we or the A&E determine it will be beneficial.

The A&E should be aware that there are differences between private work and Government work, such as: (1) the Government cannot limit bidding to a selected list of contractors known to do good work unless approved in advance under specific and limited circumstances. **In most cases, any contractor can bid.** Therefore, drawings and specification requirements must leave nothing to the imagination. They must be clear, concise, and provide thorough detailing of existing and proposed construction. (2) Department of Defense requires the use of Federal, Military, and Industry specifications

for procurement of materials and equipment covered by these specifications. Use of these specifications assures the non-restrictive competition required in the expenditure of public funds. Proprietary specifications are not allowed **without written authorization**. Failure to grasp these basic differences in rules and policies has been the source of many costly disputes. It is essential that all personnel responsible for the execution of an A&E or Engineering Services (ES) contract with LANTNAVFACENGCOM study this guide and follow the procedures and instructions set forth herein. General instructions cannot cover every situation. Specific problems relating to a particular project will be jointly resolved in conferences with activity personnel and the project manager (PM.)

Our underlying philosophy is one of responsive, responsible, and defensible design for Navy shore facilities with a commitment to design principles and practices that are requirements-based, logical, and conservative. Our designs must produce facilities that are straightforward and businesslike. They must respond to user needs, but reflect a responsible use of public funds. They must be defensible in terms of scope, cost, and appearance. Appropriate, defensible design is:

Well planned
Effective in function
Appropriate in form and appearance
Cost-effective
Constructable
Adaptable and durable over time

Monumental structures, stylistic applications of ornament, extreme configurations, excessive automation/mechanization, poor choices of utility, electrical or HVAC systems, and exotic landscaping or materials are inconsistent with our objective to create pleasant, efficient and cost effective facilities.

This philosophy is not direction for bare-bones austerity or to eliminate all building amenities. Excellent designs can be responsive, be responsible, fully meet the user's needs, contribute to the shore environment, and reflect the quality and character of the Naval service. The challenge is to strike a prudent balance between need and desire, and between the ideal and the realistic.

Before beginning the design, the A&E shall review current applicable policy, criteria, and instructions, and make a thorough study of conditions at the site and the requirements of the project. If, after an analytical review, the A&E is of the opinion that a deviation from Navy policy, criteria or instructions would be of benefit to the government, the A&E shall bring the matter to the attention of the AIC/EIC for a decision. LANTNAVFACENGCOM encourages the A&E to use his/her ingenuity, talent and professional expertise to develop the best possible design for all elements of the project within the constraints imposed. However, the use of untried concepts and materials for which no "track record" exists is discouraged and will be rejected. Those projects, which in themselves are state-of-the-art, will be acceptable.

- ## Conflicts of Interest

Firms that design, prepare plans and specifications, or cost estimates for a construction contract or procurement of supplies or services, cannot provide the construction or supplies or services. This limitation also applies to subsidiaries and affiliates of a firm.

- ## Release of Information Pertaining to Design Projects

The A&E shall give no information concerning a project to anyone other than authorized station personnel, other A&E's performing design of related facilities and personnel of LANTNAVFACENGCOM. During the bidding period, any requests made of the A&E by prospective bidders for clarification or intent of drawings and specifications should be referred to the Director, Construction Contracts Division, LANTNAVFACENGCOM. However, sources of supply for special equipment may be given to contractors. The A&E should **promptly** notify LANTNAVFACENGCOM of any necessary corrections or clarifications of the drawings and specifications. Release in any form of information pertinent to a project under design or construction for publication, for public speeches or address shall not be made without first securing clearance and a release in writing from the Commander, Atlantic Division, Naval Facilities Engineering Command. All material for which clearance is desired shall be submitted in duplicate.

- ## Data and Material Furnished by the Government

Current Engineering and Design Criteria for Navy Facilities, Military Handbooks, NAVFAC Design Manuals, etc., can be found on the NAVFAC Criteria web site (http://www.efdlant.navfac.navy.mil/Lantops_15/Publications_15.htm). It is the A&E's responsibility to become familiar with and updated on the most current changes.

Materials furnished by the Government such as: reference drawings, surveys and soil borings are provided to assist the A&E and are not intended in any way to relieve the responsibilities of the A&E, unless otherwise noted by the Contracting Officer. The A&E of record will be totally responsible for all information described in the design documents.

- ## Consultation Services

During design or study preparation, various disciplines are available for consultation. When the A&E contract is for drawings and specifications preparations, our personnel identify the project by the last four digits of the **CONSTRUCTION** contract number. The A&E is encouraged to discuss technical matters with the appropriate LANTNAVFACENGCOM technical reviewers during each phase of the design, especially during the preparation of the 35% design documents. The name or initials and telephone number of the reviewer for each discipline is listed on each LANTNAVFACENGCOM standard comment sheet returned to the A&E. Should problems arise in the coordination effort, contact the PM. Written confirmation of discussions should be directed to the PM. For a listing of the LANTNAVFACENGCOM design staff points of contact (POCs) including phone numbers and Email addresses, click here: POCs (http://www.efdlant.navfac.navy.mil/lantops_04/poc04.htm)

- ## A&E Performance Evaluation

An evaluation of the performance of the A&E is prepared concurrent with the final review of the drawings and specifications or other services performed. This evaluation includes a rating of services performed in such categories as thoroughness of site investigation, quality control procedures and execution, plans/specifications accurate and coordinated, plans clear and detailed sufficiently, management and adherence to schedules, meeting cost limitations, suitability of design or study results, solution environmentally suitable, cooperation and responsiveness, and quality of briefings and presentations.

Upon completion of the construction contract, a second evaluation is completed by the ROICC with emphasis on quality and constructability of the design; timeliness and response with respect to shop drawing review, clarification of drawings/specification intent and resolution of construction problems, and cooperation.

The completed evaluation is permanently retained in the A&E's file at LANTNAVFACENGCOM for review and consideration by future Selection Boards and is distributed to the A&E of record and to other Government agencies (via the Architect/Engineering Contract Administration Support System (ACASS), Portland, Oregon). A&E ratings are available for review by the Designer of Record upon request to the PM.

- ### A&E Performance Awards

  Two programs currently exist to provide recognition of outstanding performance:

  - Awards Program for Design and Related Activities (NAVFACINST 5061.7, the latest edition).

    Purpose: To set forth the scope, policy, procedures and responsibilities for the establishment and conduction of the Naval Facilities Engineering Command (NAVFAC) Design Awards Program; to address NAVFAC's participation in design awards programs and competitions of other agencies and organization; to identify other NAVFAC facilities-related awards programs and clarify their relationship to the NAVFAC Design Awards Program.

  - Industrial Incentive Plan. (LANTNAVFACENGCOMINST 4804.1C)

    Purpose: To provide recognition for performance by a contractor in excess of contract requirements, in one or a combination of the following areas: Better Product, Speed of Accomplishment, Savings to the Government, Cooperation beyond the contract terms to serve the convenience of the Command, the Navy, or the U.S. Government.

    This program allows giving special recognition for exemplary performance in the delivery of particular aspects of A&E provided services. Two types of awards exist for exemplary fulfillment of one or a combination of A&E services. The first, given by the Commander / Commanding Officer of an EFD or independent OICC, is the **Certificate of Appreciation** granted for exemplary performance on a contract. The second, given by the Commander, NAVFACENGCOM, is the **Commander's Certificate of Commendation** granted for outstanding performance significantly in excess of contract requirements.

• Communications

Direct communication with the LANTNAVFACENGCOM design reviewer (AIC/EIC) is encouraged. If you have a question concerning a particular comment, contact your LANTNAVFACENGCOM reviewer. It is requirement to resolve comments prior to the next submittal, see submittal section of this document for details. This may avoid unnecessary re-submittal of plans and specifications due to a misunderstood comment.

- **Engineering and Design Division POC and Technical Specialty Listing**

  LANTNAVFACENGCOM maintains a listing of Engineering and Design Division points of contact (POCs) and technical specialists, including phone numbers and E-mail addresses. Click here for Points of Contact and Technical Specialty Register (http://www.efdlant.navfac.navy.mil/lantops_04/poc.htm).

• Design Considerations

- **Design Excellence**

  Excellence in architectural design is a primary goal of LANTNAVFACENGCOM. Accordingly, quality architectural design that is functional, environmentally and energy conscious and compatible with existing elements is required for all projects. Good architectural design is proportional to design effort, not to project cost. See the Architectural Design Guide for more detail on appropriate architecture and architectural compatibility.

  Excellence in engineering design reflects appropriate functional facilities at the lowest practical construction cost, with due consideration for economy of operation and maintenance. Construction materials and equipment must be of a quality that is consistent with the intended use of the facility and reflect local availability and construction skills. New materials and methods should be considered, but only if they provide an economic or functional advantage.

- **Scope of Work**

  The A&E is restricted to the authorized contract scope of work provided in the contract's Appendix 'A'. Deviations from the scope include: incorporating unauthorized changes, increasing the cost above programmed amounts for the project, increases in area, major changes in construction criteria, the inclusion of unauthorized buildings or areas, selection of specific systems or equipment without economic or technical evaluation, or introduction of special equipment. The LANTNAVFACENGCOM Project Manager (PM) is authorized by the Contracting Officer to perform general oversight and technical administration of the negotiated contract. In that position the PM may provide in-scope direction to the A&E, and assures the terms of the negotiated services. The PM will administer the scope and outside agency interface; and from our Engineering and Design Division, provides criteria and technical oversight. The Contract Specialist is responsible for all contract terms, changes or deviations requiring contract adjustments. No changes to the contract scope will be made or additional work authorized without the prior approval of a Contracting Officer.

  It is the A&E's contractual responsibility to design a facility that can be constructed within the funds available and meets the design energy targets.

  During the progress of work, the A&E should expect minor changes in criteria within the general scope of the project and should make necessary adjustments accordingly. Generally the 35% submittal, FACDs, and design charettes are intended to clarify and establish specific requirements of the project. Incorporation of Value Engineering (VE) comments of minor consequence which should have been evaluated during the 35% design preparation, and changes in functional layout occurring during design review, are

considered within the scope of the contract. Should **major** changes in the scope of work be required, a contract modification will be issued.

A member or individual of the A&E firm shall be designated as Project Manager (PM) and LANTNAVFACENGCOM shall be so notified, and as such the person shall be fully cognizant of the requirements of the performance schedule. The PM will work directly with the assigned LANTNAVFACENGCOM PM who will furnish design guidance necessary for the successful execution of the work.

- ## Construction Schedule

Construction scheduling, i.e., sequence of events and time of construction, may be required to be submitted per the Appendix 'A'. For projects which involve interruptions of existing building operations or major utility usage, it is the A&E's responsibility to discuss the required outages and interruptions with the appropriate station Public Works and operations personnel, and establish a construction schedule for these interruptions. Any required outages, interruptions or sequence of construction operations shall be thoroughly documented in the project specifications, drawings and cost estimate. Where these outages and interruptions adversely impact the project costs or time of completion, notify the PM. A brief description of the restrictions and their basis may be required.

- ## Occupational Safety and Health Standards

"Occupational Safety and Health Standards" are applicable to A&E contracts. The Department of the Army, Corps of Engineers, "Safety and Health Requirements Manual", Federal, State, and local laws, rules, regulations, and special requirements established during fee negotiations, shall form the basis of those requirements. Our particular concern is directed to the individual safety during the performance of contract requirements while on Navy property. The A&E of record (hereinafter referred to as the contractor) has the primary responsibility of assuring the safety and health of the firm's personnel while on Navy property.

The contractor, in coordination with the using Activity, shall determine all known hazards relating to the project site. Prior to initiating field investigation, the contractor shall ensure that a safety plan is developed and distributed to the Public Works Officer.

The plans should address as a minimum:

A. Personal protective equipment required.
B. Definition of work zone limits.
C. Special safety precautions included in contract fee negotiations.
D. Hazard evaluation and evaluation; e.g., hazards requiring accompanied performance by two or more persons, subsurface or overhead hazards which may be encountered, and special procedures, if any, to be followed, such as asbestos hazards and procedures and decontamination procedures, etc.
E. Activity point of contact and telephone number to be advised concurrent with site access and in event of emergency.

The safety plan submitted to the Government shall be for information purposes only.

The Contractor shall contact the designated Activity point of contact, prior to each visit to the site.

- ## Economy in Design and Construction

It is LANTNAVFACENGCOM's objective to obtain a functionally adequate, habitable, and economical facility. In the design of all projects, it is the Navy's policy to provide functional facilities of a durability consistent with the mission. The A&E shall bear in mind that the interest of the Government is to acquire facilities which are economical in design, construction, operation and maintenance. Accordingly, although due consideration shall be given to appearance, structures shall not entail frills and embellishments and shall not be conceived on the basis of unnecessarily complicated and costly construction systems, materials or equipment.

Although the above paragraph stresses economical design, The A&E is responsible to assure compatibility of the new structure with the architectural character of the base activity. For people oriented facilities such as: Bachelor Enlisted Quarters (BEQ), Bachelor Officers Quarters (BOQ), dining facilities, lounges, recreation areas, libraries, chapels and theaters, the A&E will be responsible for a totally integrated design. Integrated design means the complete design of a facility, taking into consideration all engineering disciplines involved plus landscape architecture and complete interior design for a comprehensively designed facility. An integrated design achieves harmony of site, landscaping, building design and functional requirements.

- ## Selection of Materials

LANTNAVFACENGCOM's objective is to provide functional and economical shore facilities for the Navy establishment. We are not in the research and development business. Consequently, it is necessary to investigate thoroughly all new materials that have not been proven in the specific type of service involved, or whose promotion is based upon unsupported statements and lists of supposedly satisfied users. Materials must be used in a manner that will afford the maximum service at the lowest life cycle cost. Operation and maintenance costs must be weighed against initial costs to achieve maximum economy. Before deciding upon a specific material for design or specification purposes, the following points shall be considered:

- What is the contemplated life of the facility?
- What are the climatic and operating conditions?
- Will material be used to the best advantage under contemplated conditions, including aesthetics?
- Is material a stock item or does it require special processing?
- What is the availability of material in the area of usage?
- Is the material proprietary or restrictive?

Where new unproven materials are selected, documentation including detailed economic analysis justifying its use may be required.

For overseas locations, the A&E must investigate and consider the types of construction material and trades indigenous to the area.

- ## Environmental Considerations

Asbestos-containing materials (ACM) are commonly found in older building materials and related products. Federal regulations require a facility asbestos survey prior to a renovation, alteration, repair or demolition project that will disturb building materials. EPA-accredited, state-licensed asbestos personnel must do the sampling and preparation of

the report, plans and specifications. Firms must have licenses in the state where the construction work is to be accomplished.

Lead-based paint (LBP) and other lead-containing materials (LCM) are found in older building materials (e.g., paints applied prior to 1980, etc.) and other related products. Examples of unique site conditions are contaminated soil, imbedded bullet fragments, or outdoor removals that require special scaffolding and containment. Occupational Safety and Health Administration (OSHA) regulations require a survey prior any construction project that will disturb materials suspected of containing lead. EPA-accredited, state-licensed lead personnel must do the sampling and preparation of the report, plans and specifications. Firms must have licenses in the state where the construction work is to be accomplished.

Underground Storage Tanks (UST)/Aboveground Storage Tanks (AST) demolition, removal and disposal involves several environmental issues regarding tank cleaning, product/sludge disposal, soil contamination/disposal and hazardous waste determination. The designer is required to coordinate all these issues as part of the design process and provide all information in the plans and specifications.

Existing contaminated soil and groundwater sites require special detail during field investigation and design. The A&E will be required to coordinate environmental issues with the Environmental Division, Activity Environmental office and the ROICC during the design process.

For all environmental issues see the Environmental Design Guide for additional guidance.

- ## Sustainable Design

Presidential Executive Order 12852 established the Council on Sustainable Development. A derivative of that order has been the ideological growth of environmental improvement to planning, design and construction practices. Sustainable design is project unique and is an intentional focus by the design team on the environmental impact of the facility through its life and its disposal. The design team's understanding of scope and budget best judge environmental improvement but facility sustainable improvement is generally characterized as:

- Increased energy conservation and efficiency through better application of passive concepts, application of new, proven, technologies and renewable energy resources such as building integrated photo-voltaic when economically feasible, use of energy star compliant equipment, fixtures, etc.
- Reduction or elimination of toxic and harmful substances in facilities and their surrounding environments.
- Improvements to interior and exterior environments leading to increased productivity and health.
- More efficient use of resources and materials, especially water resources.
- Selection of materials and products with recycled content.
- Recycling of construction waste and building materials after demolition.
- Reduction in harmful waste products produced during construction.
- Facility maintenance and operational practices that reduce or eliminate harmful effects on people and the natural environment.

The Whole Building Design Guide (http://www.wbdg.org/index.htm) is intended to aid the design team in creating its environmental goals for each facility. Look under the "Sustainable" section of "Design Criteria." For additional information, also see Sustainable

Design (http://www.efdlant.navfac.navy.mil/lantops_04/designguides.htm) on the Engineering and Design Division web page under Design and Policy Documents.

- **Energy Considerations**

  Naval facilities must meet certain design energy targets as required by Title 10 CFR, Subpart A, Part 435, “Energy Conservation Voluntary Performance Standards for New Commercial and Multifamily High Rise Residential Buildings, Mandatory for Federal Buildings”, published January 30, 1989, the Federal management Improvement Act of 1988, and the Department of Defense Energy Target requirements. For additional information on energy requirements, see the Mechanical Engineering Design Guide.

- **Antiterrorism/Force Protection Construction Standards**

  A/Es are required to design to the latest version of the “Force Protection Standard” for all new naval facilities. The "Department of Defense Antiterrorism/Force Protection Construction Standards", is available from the Engineering and Design Division for A/Es that have contracts for design services.

- **Handicap Considerations**

  The Architectural Barriers Act of 1968, PL 90-480, as amended through 1984 requires that certain buildings financed with Federal funds are so designed and constructed as to be accessible to the physically handicapped. The implementing criteria for this Act are the Uniform Federal Accessibility Standards (UFAS). It is NAVFAC policy that all facilities that are open to the public or limited segments of the public or which may be visited by the public during the conduct of normal business, shall be designed and constructed to be accessible to the handicapped. Further, it is Department of Defense policy to design facilities in conformance to the requirements of both UFAS and the Americans with Disabilities Act Accessibility Guidelines (ADAAG). For further information, see the Architectural Design Guide.

- **Historic Considerations**

  The National Historic Preservation Act (NHPA), PL 89-665 as amended requires that any Federal undertaking take into account the effects of that undertaking on historic properties. This may require the use of qualified professional archaeologists to conduct surface and subsurface surveys in advance of design or construction, monitoring during construction and emergency data recovery if significant historic resources are encountered during construction. In addition, any building or structure that is fifty years old (or less if associated with World War II or is otherwise significant because of unique qualities) may be eligible for listing in the National Register of Historic Places. The A&E may be tasked to assist in the consultation process with the regulatory agencies, including the State Historic Preservation Officer and the Advisory Council on Historic Preservation.

- **Pre-negotiation Conferences**

  Prior to submitting a fee proposal, it is the responsibility of the A&E to visit the site and inspect the location of work and to become familiar with pertinent local conditions. In addition the A&E should review the current project scope. It is the policy of LANTNAVFACENGCOM that a pre-negotiation conference will be formally conducted at the Activity for all MILCON and other major funded projects to clarify scope issues prior to negotiation.

- **Electronic Deliverables Criteria**

  LANTNAVFACENGCOM is requiring that **all** plans and specifications be produced and submitted in Electronic Bid Solicitation (EBS) format at the appropriate submittal stage. Additional paper or bound copies at their respective scales may be required as described herein or dictated by the Appendix A scope of work. Criteria for the production and submittal of all required electronic deliverables including, file format, sheet size, CAD standards, electronic signatures, and media are contained in the LANTDIV Electronic Bid Solicitation – Manual of Policies and Procedures (http://www.efdlant.navfac.navy.mil/lantops_04/designguides.htm).

  Any questions shall be directed to the Engineering and Design Divisions, Information and Technology (IT) Manager (mailto:04ITManager@efdlant.navfac.navy.mil).

- **Metrication**

  The Metric Conversion Act of 1975 amended by the Omnibus Trade and Competitiveness Act of 1988 named the metric system the preferred system of measurement in the United States. In 1991, President Bush signed Executive Order 12770, Metric Usage in Federal Government Programs. Responding to that executive order, the Department of Defense issued DOD Instruction 5000.2, Use of the Metric System, which requires that metric standards be used in all DOD activities. For additional information regarding the LANTNAVFACENGCOM metric policy, please see Metric Design Policy.

- **Quality**

  The A&E shall be responsible for the professionalism and technical accuracy and coordination of all services such as designs, drawings, specifications, cost estimates, and other work or materials furnished by the contractor under the contract.

  The project submitted by the A&E shall represent the best engineering solution possible for the scope of work in the A&E contract. All work must be in accordance with current criteria, guides, and specifications established by the Naval Facilities Engineering Command, and shall be in accordance with the best engineering practices. Workmanship shall be neat with all lines and lettering of uniform weight and clarity for complete legibility and satisfactory reproduction. Any computer disks submitted must be scanned for viruses using a commercial virus scanning program. **All elements of submittals shall be checked by the A&E and such check shall be made by persons other than those preparing the materials and by professional personnel trained in that specific discipline**. The various departments in LANTNAVFACENGCOM will review the submittal for compliance with Government requirements and standard criteria. **The A&E shall correct errors and deficiencies at no additional cost to the Government.**

• Procurement Strategies

Below are procurement strategies used by LANTNAVFACENGCOM to obtain facilities or projects. All requirements of this guide still apply regardless of the procurement method used.

- **Design / Bid / Build**

The conventional method of acquisition where design and construction are contracted separately. A&Es are selected and design contracts are negotiated according to the requirements of the Brooks Bill, and construction contracts are awarded to the lowest responsive bidder.

- ## Design / Build

  - **Definition**

    A method of acquisition where the design and construction are awarded as one contract. Design/Build projects require the Contractor to complete all or portions of the project design and construct the project in accordance with the approved construction documents. Project criteria is defined in the bid documents prepared by the A&E and approved by LANTNAVFACENGCOM.

  - **Invitation for Bids (IFB)**

    A Design/Build contract where award is based on low bid. The project is normally defined by a detailed scope of work, a concept drawing, or a more complete design package.

  - **Request for Proposals (RFP)**

    A Design/Build contract where award is based on a *Best Value* approach and includes evaluation of technical and price proposals. The project is normally defined by a detailed scope of work. LANTNAVFACENGCOM's preferred Design/Build acquisition method is the Two Phase RFP. Additional information regarding Two Phase and other Design/Build strategies can be found in the section "Other Submittal Requirements" under "Design/Build Procurement".

- ## Best Value Source Selection

  A method of procurement to pre-qualify contractors and/or A&Es to compete for either design/build or design/bid/build contracts.

- ## CONDEL

  A method of procurement where a pre-qualified and pre-selected contractor and the contractor's approved A&Es enter into a negotiated construction or a design and construction contract.

- ## MACC (Multiple-Award Construction Contracts)

  Multiple-Award Construction Contracts (MACCs) are multiple award indefinite delivery construction contracts where award is made to more than one contractor, each of whom will compete for future construction task orders. Single contracts will be awarded to each of the successful proposers based on technical quality and best value to the Government using the initial project offering to determine best value. Competition for task orders may be based on low price, technically acceptable or best value. The basis for award will be determined and announced at the time of request for bids or proposals.

- # The LANTNAVFACENGCOM Design Process

The LANTNAVFACENGCOM design process is a client focused design process. Many projects require the use of either Functional Analysis Concept Development (FACD), or On-site Design Charette Sessions. Both of these efforts require project analysis and concept design on-site during an intensive effort, which includes the Client (the user and base personnel), the A&E team (all disciplines), and LANTNAVFACENGCOM. The product is a concept design within scope and budget that has the input and approval of the using Activity. For additional information, please see the Value Engineering, Functional Analysis Concept Development (FACD), and Design Charette Guide. Not all actions or submittals are required for every job. The overall requirements for any specific job will be as indicated in the Appendix A.

The LANTNAVFACENGCOM Design Process

Action or Submittal	Products or Deliverable
1. Pre-Negotiation Conference	Refine Scope and Appendix 'A'
2. Government Estimate/Negotiation/Contract	Negotiated Fee and Issue contract
3. Site Investigation	Topographic Survey Soil Borings Document existing conditions Asbestos and Lead testing
4. Design Options	
a. Functional Analysis Concept Development (FACD)	Preliminary Basis of Design Activity approved drawings VE and other documentation Cost estimate
b. On-Site Design Charette	Design Requirements Activity approved sketches VE alternatives for projects over $5 mil Budget estimate confirmation
c. Pre-design Conference	Design Requirements Budget estimate confirmation
5. 35% Design Development Submittal	Basis of Design Drawings Outline Specification Color Boards Preliminary Cost Estimate
6. 65% Progress Submittal (Option)	Determine per project
7. 100% Pre-final Submittal	Drawings Color Boards Specifications Calculations Cost estimate Draft of Permits Dust and Erosion Control Plan Stormwater Management Plan Manufacturer's catalogs
8. Final Submittal	All Electronic Deliverables* Color Boards and Binders Final Cost Estimate Calculations Permits

* *See LANTDIV EBS Manual of Policies and Procedures*

9. Amendments	New/Revised drawings Sketches New/Revised spec sections Amendment document Cost estimate (if needed)

• Pre-Design Services

• 1391 Plus and PCE Preparation

The Cost Engineering Branch of the Engineering and Design Division has prepared a 1391 plus or PCE checklist and example form document for use by A&Es.

• Energy Study (Solar Analysis and Energy Analysis)

For specific requirements concerning Energy Studies, see the Mechanical Engineering Design Guide.

• Environmental Requirements (Asbestos, Lead paint, PCB's and Mercury)

When required by the Appendix 'A' for the project, the A&E shall conduct all required surveys, information gathering, and analytical testing. For specific guidance on conducting this field investigation and preparation of the plans and specifications, see the Environmental Design Guide.

• Field Investigation

• Responsibilities

The A&E shall obtain all site and building data and investigate existing site conditions, utilities, and facilities as necessary to properly integrate the design of the project with the existing conditions. Except as otherwise contracted, field investigation shall include complete and accurate site investigation, topographic survey and verification of location and availability of utility and drainage systems. Existing as-built record drawings, when available, will be furnished for information. However, the A&E shall be responsible for field verification of the as-built drawings and other site features that may influence the design of the project.

• Coordination

All site work, including topographic and soil surveys, shall be coordinated with Public Works personnel. During the execution of field investigation work, the A&E shall be responsible for obtaining necessary permits, and complying with applicable laws, codes, and regulations, including OSHA regulations. The A&E shall be responsible for all damages to persons and property that occur as a result of the A&E's fault or negligence. The A&E shall take proper safety precautions to protect the public, the property of the public and the Government from physical hazards and unsafe conditions. Upon completion of field investigation, the A&E shall return the property to its original condition except as released in writing by the client activity.

- **Discipline Requirements**

  See the individual Design Guides for each discipline's specific field investigation requirements: Design Guide Page

Geotechnical Report

For specific requirements for the Geotechnical Report, see the Geotechnical and Paving Design Guide.

Life Safety Code Surveys

For specific requirements on Life Safety Code Surveys, see the Fire Protection and Safety Design Guide.

Pavement Evaluations

For specific requirements concerning Pavement Evaluations, see the Geotechnical and Paving Design Guide.

Soil Borings

For specific requirements for Soil Borings, see the Geotechnical and Paving Design Guide.

Topographic Survey

For specific requirements concerning Topographic Surveys, see the Civil Engineering Design Guide.

Design Services

Architectural Renderings

- **Option**

  At the Government's option, an architectural rendering may be required either during or following the design of a project.

- **Rendering Format**

  The rendering shall be a full vignette/fully developed on heavy illustration board. Approximate finished size shall be 24" X 30" with a minimum inside mat dimension of 16" X 20". Provide a label identifying the project title and location, A&E and construction contract numbers, A&E name and date.

- **Rendering Scope of Work**

  Unless otherwise directed, provide the following:

  - Submit two perspective sketches of the proposed rendering for approval of one.

- Paint the rendering using casein tempera.
- Provide one full size photographic reproduction of the original rendering.
- Frame and matte the original and photographic copy in a contemporary metal frame using non-glare glass.
- Indicate the project name and location and the A&E's name on the matte using lettering legible from 8 feet away.
- Ship the rendering, photographic reproduction and the negative in resilient packaging to ensure damage-free delivery.

• Basis of Design

The Basis of Design is a narrative presentation of facts sufficiently complete to demonstrate that the concept of the project is fully understood and that subsequent design details and their ultimate presentation in the final drawings and specifications will be based on sound architectural and engineering decisions. A discussion and description of the design in each if the disciplines appropriate to the project shall be provided.

The Basis of Design shall be a bound document, 8 ½" X 11", organized by discipline. Provide a cover sheet identifying the document as the Basis of Design, and including the submittal stage, project title and location, A&E and construction contract numbers, A&E name and date. See the individual Design Guides for specific discipline Basis of Design requirements: See the Design Guide Page.

• Calculations

- **Purpose**

  Design calculations shall be submitted at the stages of design indicated in the Scope of Work. Calculations shall be organized by discipline in the same order as the drawings and bound in a manner appropriate to the number of sheets included. A cover sheet identifying the document as design calculations and including the submittal stage, project title, project location, A&E and Construction contract numbers, and the date shall be provided. An index sheet shall follow the title sheet. Sub-indexes shall be provided for disciplines having a very large number of sheets. All sheets shall be numbered and the page numbers included in the index. The calculations shall include references to all Navy and non-Navy criteria used. Computer outputs shall be properly identified and appropriately referenced as to the program name, version and source. Calculations shall be prepared in metric units when metric design is required. For additional information and specific requirements by discipline, contact the project AIC/EIC.

- **Format**

  Calculations shall be bound documents, 8 ½" X 11". Provide a cover sheet identifying the document as the Calculations, and include the submittal stage, project title and location, A&E and construction contract numbers, A&E name and date.

- **Discipline Requirements**

  See the individual Design Guides for specific discipline calculation requirements:

  Design Guide Page

- ## Color Boards and Binders

  See the individual Design Guides for specific discipline requirements for interior and exterior color boards and binders:

  - Architectural Design Guide
  - Interior Design Guide

- ## Construction and Operating Permits

  - **General Construction and Operation Permits**

    The Appendix A will list the required permits as part of the A&E Services. These permits include Stormwater Management Permit Application, Erosion/Sedimentation Control Permit Application, and Water and Sanitary Sewer Extensions/Sewage Pumping Station Permit Application. Specific requirements for each permit application can be found in the Civil Design Guide.

  - **Environmental Construction and Operation Permits**

    The Appendix A will also contain a list of required environmental permits for the project. Guidance on obtaining these permits can be found in LANTNAVFACENGCOMINST 11010.21 (dated 6 June 1990), "PROCEDURES FOR OBTAINING CONSTRUCTION AND OPERATION PERMITS FOR FACILITIES."

- ## Cost Estimate

  Cost estimates, when properly prepared, provide a check of plans and specifications for constructability, coordination conflicts, discrepancies, omissions and cost control. The Government uses them to establish/verify budgets and to develop historical data for future budgeting purposes. When the Appendix A requires a construction cost estimate, the designer shall follow the instructions provided in the Cost Engineering Guide.

- ## Design Charette

  Design Charettes are cooperative efforts by the Design Team, User/Client representatives, Engineering Field Division personnel, and other interested parties. They include on-site development of a conceptual design in response to functional, aesthetic, environmental, base planning, site, budgetary and other requirements. On-site design Charettes are conducted to develop conceptual designs that respond to project scope, budget and technical issues, in order to meet User's functional requirements. Design Charettes encourage interaction between Users and designers to improve understanding by all of project functional requirements and the related design and project issues. The knowledge, experience and creativity of the Design Team are exercised to challenge and improve the initial conceptual design. For a complete description of a Design Charette and the associated requirements, see the Charette information on the website.

- ## Drawings

  - **General**

    The preparation of drawings shall conform to the LANTDIV EBS Manual of Policies and Procedures and as modified herein. Additionally, the requirements of MIL-HDBK 1006/1, "Policy and Procedures for Construction Drawings and Specification Preparation" (http://www.efdlant.navfac.navy.mil/Criteria/Publications_15.htm#MILITARY HANDBOOKS), apply to topics not covered in the EBS Manual.

  - **Presentation**

    Drawings should be consistent in presentation and format. If one discipline shows material selections directly on the details, all other disciplines should conform to that format, and not use numbers to refer to a numerical legend elsewhere on the drawings.

  - **Drawing Numbers**

    NAVFAC drawing numbers will be assigned by the Design Division as part of the 100% review process and will be furnished to the designer with the comments returned with the 100% submittal.

  - **Scales**

    It is LANTNAVFACENGCOM policy is to use nominal metric dimensions and units on drawings and to use metric scales on drawings.

  - **Metric Dimensioning**

    It is LANTNAVFACENGCOM policy is to use nominal metric dimensions and units on drawings and in specifications. It is further policy to use soft metric specifications for CMU and recessed lighting fixtures, as well as for related modular components required for product/design compatibility, such as ceiling tile, T-bars, hangers, and air diffusers in suspended ceiling systems along with recessed lighting. See "Metric Policy".

  - **Material Symbols**

    Unless indicated otherwise in the EBS Manual or this document, material symbols shown on drawings shall be consistent with those used in the most recent issue of **Architectural Graphic Standards**.

  - **Proper Use of Notes on Drawings**

    - Be consistent with grammar used in notes on all drawings. Wherever possible use declarative statements to describe work to be accomplished by contractor. For example, instead of using "**contractor shall provide**", use "**provide**". It is understood that the notes are written for the contractor's action.

- Do not use "**to be**" for describing work that will accomplished by the contractor. "**To be**" implies that someone will accomplish the work other than the contractor, such as the government or another contractor. If work is to be accomplished by government, for example, say, "**government will** remove storage building prior to start of construction".

- Do not use "**install**" for work that is to be accomplished by the contractor. "**Install**" means government/others will furnish equipment/materials and contractor will install. "**Furnish**" means contractor shall only furnish; government/others will install. Use "**provide**" when you want contractor to furnish and install equipment/materials.

- Do not use "**proposed**" for new construction. Use "**new**" for work that will be accomplished in the contract. "**Proposed**" means future work by others or work not in this contact.

- Do not use ambiguous statements that can't be enforced by the ROICC during construction. Example: "**grade to drain**"; "**hand excavate carefully**"; "**provide materials in good condition**", etc.

- Be careful with statements like "**remove and replace"**, which means to remove old item or material and replace that item or material when work is completed. This statement would be appropriate for work in a pump station where pumps were removed prior to the work and those same pumps replaced after the work is completed. On the contrary, if a portion of a concrete walk is cracked and requires replacement, say "**remove and provide new**".

- When referring to requirement for coordination between contractor and government agency, for example, use "coordinate utility connection with **contracting officer**"; do not use words such as "**Navy**", "**ROICC**", "**PWC**", etc. for government agency.

- Do not indicate "**see specifications**" on the drawings. The drawings and specifications complement each other.

- Do not use "**all**" or "**any**".

- Do not use words that have multiple meanings, requiring opinions, or judgmental decisions, such as "timely", "nearly", "good-condition", "suitable", "well-balanced", "suitable for intended use", "reasonable", "approximately", "reliable", "proper", "usable", "appropriate", "adequate", or "qualified".

- Do not use terms that are not biddable by the contractor nor enforceable by the government, such as "recondition", "as directed", "equal to", "as required", "similar to", "as necessary", "as close as possible", "repair", "match existing", "or refurbish".

- Some terms are only enforceable if quantities are shown on the drawings or included in the specifications, such as "as indicated", "as shown", "specified herein", and "as noted".

- **Discipline Requirements**

  See the individual Design Guides for specific discipline drawing requirements:

  Design Guide Page

- ## Function Analysis Concept Development (FACD)

  FACDs are cooperative efforts by the Design Team, User/Client representatives, Engineering Field Division personnel, and other interested parties. FACDs include on-site development of a conceptual design in response to functional, aesthetic, environmental, base planning, site, budgetary and other requirements with consideration of life cycle consequences of alternative design solutions. FACDs use Value Engineering techniques during design Charettes to help develop conceptual designs, which respond to project scope, budget and technical issues. FACDs allow an opportunity for Users to work closely with designers to improve understanding by all of project functional requirements and the related design and project issues. For a complete description of FACDs and instructions to A&Es see the Value Engineering, Functional Analysis Concept Development (FACD), and Design Charette Guide on the website.

- ## Interior Design

  For specific requirements concerning Interior Design – Architectural (IDA), Interior Design – Furnishings (IDF), or Comprehensive Interior Design (CID), see the Interior Design Guide.

- ## Specifications

  The contract specifications are an integral part of the contract documents, and together with the contract drawings, they provide a complete and biddable contract package. Government specifications differ from commercial specifications in that the materials are specified generically rather than by product name. This is done to allow competition among suppliers of materials of similar quality. At a minimum, three manufacturers or suppliers should be capable of providing each specified product. The NAVFAC guide specifications are written in this generic format and shall be used for all LANTNAVFACENGCOM designs.

  It is imperative that the designer coordinates the drawings and the specifications. When the drawings and specifications are not in agreement, the specifications hold precedence. This may not always provide the government with the desired products. Ambiguities, discrepancies, and omissions in the contract documents are always settled in favor of contractor. This may require a negotiated change order to the contract at additional cost to the Government. A clear, well-coordinated set of contract documents minimizes the need for construction change orders and allows the Government to obtain the desired facility at the best possible price.

  For more detailed information concerning the preparation of project specifications, please see the Specification Guide.

- ## Quality Coordination Review

  The A&E will be expected to perform a quality control review. This review will evaluate both the technical accuracy and discipline coordination. The **100% submittal** shall include a single set of 100% complete prints and specifications highlighted to indicate that the review was performed and corrections made. A signature is required on the "Quality Control" line in the title block of the original cover sheet, indicating a quality coordination review was performed. Such items as section, detail, and note references to other sheets, major dimensions, and equipment locations shall be marked. Verify that all equipment is correctly identified the same way on all sheets and in the specifications. Ensure that all work as indicated on the drawings is fully and consistently specified.

- ## Value Engineering (VE)

  - **Purpose**

    The purpose of VE is to maximize value by improving function and quality, while minimizing total life cycle cost. The Navy desires the most cost effective facility design, consistent with intended use, client satisfaction and appropriate design. Participation by Users and the design team are welcome during all phases of LANTNAVFACENGCOM VE efforts.

  - **Definition**

    Value Engineering (synonymous with Value Analysis) is the systematic application of recognized techniques by a multi-disciplined team which identifies the functions of a product or project, establishes a worth for those functions, generates alternatives through the use of creative thinking, and provides the needed functions at the lowest overall cost. For specific requirements for VE, see information in the Value Engineering, Functional Analysis Concept Development (FACD), and Design Charette Guide.

  - **Function Analysis Concept Development (FACD)**

    FACD workshops are design Charettes during which the conceptual design is created and which employ VE methodology. An outside VE team is not used in FACD efforts. For a complete description of FACDs, see the Value Engineering, Functional Analysis Concept Development (FACD), and Design Charette Guide.

• Post-Design Services

- ## As-Built/Record Drawings

  - **Record Drawing Option**

    At the government's option, the A&E may be tasked with the preparation of the record drawings showing the as-built conditions. When this option is exercised, the A&E will be provided a marked set of the contract drawings indicating the as-built conditions.

  - **Scope of Work**

    The record drawings shall be prepared in the following manner:

- Make all drawing changes in AutoCAD-compatible format. Revisions shall be placed on the appropriate layer, same as for like elements and in accordance with the LANTDIV Electronic Bid Solicitation (EBS) – Manual of Policies and Procedures (EBS Manual.) The area of revision will be outlined and annotated with a letter. Only the outline and annotation will be placed on the "Drawing Revision" layer. A description of the revision will be noted in the revision block and will be placed on the drawing text layer.

- Scan all drawings not originally prepared in AutoCAD format and include in the original electronic set. Scan using raster format. Scan in accordance with Section 4.7 of the EBS Manual.

- Add this note to the cover sheet revision block: RECORD DRAWINGS MAY NOT MATCH THE ORIGINAL CONTRACT DRAWING SHEETS

- Each sheet shall be annotated “Record Drawing” and dated.

- On the cover sheet and the first sheet of each discipline (A-1, C-1, S-1, etc), all signatures, initials, dates and Sat-to information in the title block area on the contract drawings will be transferred as text on the record drawings.

- Include a note stating that these drawings supercede the original contract drawings that were stamped and signed by a registered architect or engineer.

- Provide extra sheets as required to accommodate sketch changes, amendments, and field changes.

- The sheet index must reflect the final record drawing titles and numbering.

- The completed CADD record drawing files shall be converted to PDF format per the EBS manual. Electronic Signatures are not required.

- Provide 4 CD-ROM sets that must include all record drawings (containing both the CADD & pdf format) and the final specification in pdf format.

• Interior Design Furniture Packages

For specific requirements concerning Interior Design Furniture (IDF) Packages, see the Interior Design Guide.

• OMSI Manual Preparation

OMSI manuals are usually executed as either a Priced Option or as an unpriced Phase to the A&E contract as a Post Construction Award Service (PCAS). Award of the Option or Phase should be made as soon as possible after construction award. OMSI manuals, also referred to as Technical Operating Manuals, are normally developed during the construction period. The OMSI Manuals provide the activity and it's maintenance organization with clear comprehensive data needed to safely and efficiently operate and maintain the as-built products and systems.

Most Military Construction Navy Projects (MCON) and many Special Projects require OMSI. The exceptions include projects for land acquisition and for horizontal construction

such as roads, paving, drainage and dredging. Also, OMSI may not be feasible on small projects costing less than $500,000.

If OSMI preparation is required of the A&E, a detailed OMSI Scope of Work (SOW) and Request for Proposal (RFP) will be provided to the A&E that will describe OMSI services and provide a schedule for OMSI deliverables. During the shop drawing review process, the A&E will use the submittals to prepare the manuals. Typical submittals used are SD-03, Product Data, SD-06, Test Reports, and SD-10, Operation and Maintenance Data. The 100% (Prefinal) OMSI will be submitted 30 to 60 days before Beneficial Occupancy Date (BOD.) This submittal is a "working" document to be used by the ROICC for acceptance and testing, O&M, and training by the activity. The Final OMSI submittal is generally made six months after the Prefinal, incorporating missing submittals, TABS second season report and review comments. The final submittal will also include an electronic version of the manuals on CD.

Additional information on the OMSI program may be found in the Public Works Support Services Section of the Guide under OMSI. See PWSS OMSI (http://www.efdlant.navfac.navy.mil/PSG/psguide_publicworks.pdf).

- **Shop Drawing Review and Construction Support**

At the Government's option, checking of shop drawings/submittals and other data by the construction contractor is an A&E's responsibility. For specific requirements concerning shop drawing review and construction support, see the Post Design and Construction Services (http://www.efdlant.navfac.navy.mil/PSG/psguide_construction.pdf) section of the Guide.

- **Request for Information During Construction Advertisement**

The A&E shall provide consultation services during the construction advertisement period as well as during the design period. Such consultation typically occurs in the form of a Request for Information (RFI) from contractors during the bidding process. Typically, RFI's include providing clarification of the intent of the drawings and specifications in response to questions which routinely arise during the course of bidding. The responses may result in preparation of amplifying drawings, specifications, amendments, change orders and cost estimates to correct errors, omissions, inconsistencies between drawings and specifications, conflicts in dimensions, lack of detail or poor design quality in the drawings and specifications. Amplifying drawings, specifications, amendments, change orders and cost estimates shall be prepared in accordance with the provisions and standards set forth in this Guide. The A&E shall promptly furnish consultation services without additional compensation. For additional information on the format of amendments and change orders see the Specification Guide.

See also "Consultation During Construction" in the Post Design and Construction Services (http://www.efdlant.navfac.navy.mil/PSG/psguide_construction.pdf) section of this guide for additional consultation required during construction and the evaluation of Contractor Value Engineering Change Orders.

- **Design Field Support**

See "Design Field Support" section in the Post Design and Construction Services (http://www.efdlant.navfac.navy.mil/PSG/psguide_construction.pdf) section of this guide.

Third Party Monitoring Services for Asbestos and Lead Work

Third party monitoring services may be requested through Post Construction Award Services (PCAS). These services generally include providing trained and licensed personnel to perform independent air or wipe sampling, inspection and consultation during asbestos or lead removal portions of the construction project. A separate scope of work will be provided to the A&E Firm for PCAS Third Party Monitoring Services.

Design Submittals

General Requirements

Introduction

This section discusses the submittal requirements for design and design related submittals. (Submittal requirements for individual projects will be identified in the Appendix "A". The LANTDIV EBS Manual of Policies and Procedures significantly impacts Final submittals. Please see the EBS Manual for those requirements.)

Signatures and Seals

The following names, seals, signatures and dates shall be affixed to the drawings (electronic or hard copy), plats, technical reports and specifications prior to the Final submittal:

- Each project drawing shall bear the initials of the designers, draftsmen, and reviewers involved in the preparation of the drawing. The block for the A&E name shall contain the name, address and phone number of the firm. All design subcontractors shall have this information on their respective sheets.

- A registered corporate member of the prime A&E firm shall seal, sign, and date the cover sheet listing all drawings in the set.

- All drawings, other than the cover sheets, shall be sealed, signed, and dated by the appropriate design professional as follows:

• Survey drawings	Registered land surveyor
• Environmental drawings	Registered architect or engineer **and** Certified Asbestos/Lead Project Designer (as applicable)
• Civil drawings	Registered civil engineer
• Geotechnical drawings	Registered geotechnical, civil, or structural engineer
• Landscape drawings	Registered landscape architect
• Architectural drawings	Registered architect
• Structural drawings	Registered structural engineer
• Plumbing drawings	Registered mechanical engineer
• HVAC drawings	Registered mechanical engineer
• Electrical drawings	Registered electrical engineer
• Instrumentation/Controls	Registered engineer

• Cathodic Protection drawings	Registered engineer w/NACE certification as a corrosion or cathodic protection specialist
• Fire protection drawings	Registered fire protection engineer

- **Responding to Review Comments**

  The A&E is responsible for the resolution and incorporation of government comments into the project design. The AE is required to resolve all comments that are in disagreement or need further clarification with the LANTDIV reviewer within two weeks of receiving the comments. At each submittal, previous review comments on Design Coordination/Comment sheets and marked Specifications shall be returned with each comment addressed. If the comment was incorporated into the design, a response shall so indicate. The A&E shall document the phone call or conversation where the reviewer has agreed to changes to the original comment.

- **Submittal Quality**

  The Quality Coordination Review prints are due with the 100% SUBMITTAL, however, its not too early to start the coordination process. The basis for the design can be cross-checked to ensure that the various discipline design solutions are consistent with each other, the Appendix A, the FACD, or other scoping sessions. Review the preliminary cost estimates, compare them to the project budget and look for cost creep. Are there any unresolved issues effecting the final design? The pre-FINAL submittals are not just milestones to be met, but opportunities to review your design processes and solutions, and make sure that the design team has meshed and that their approach is consistent, coordinated and on track for timely completion.

• Design Submittal Requirements

See the individual Design Guides for specific discipline submittal requirements:

Design Guide Page

• Other Submittal Requirements

• Architectural Compatibility Submittal

The Architectural Compatibility Submittal is required to document the exterior architectural design of a new facility or major renovation. For details, see the Architectural Design Guide.

• Air Force Projects

- **General**

  Due to differences in terminology between the Navy and Air Force, all references throughout the Guide to the following terms should be changed as indicated:

  - Project Engineering and PE to Project Definition and PD (Approx. 30%)
  - Schematic Design Submittal to PD Submittal (includes Preliminary PD, Final PD, and Corrected Final PD Submittals)

- 100% Submittal to Prefinal Submittal
- Public Works (PW) to Base Civil Engineer (BCE)
- Major Claimant to Major Command

- **Submittal Format**

  For those Navy Schematic Submittals, which require 8-1/2" x 11" format, an acceptable alternative for comparable Air Force DP Submittals is 8-1/2" x 14" format.

- **Cost and Scope Limitations**

  The A&E is responsible for developing project definition for a project that is completely functional, maintainable, operational, and within the cost and scope constraints for this project. If at any time the Architect-Engineer (A&E) determines that the estimated construction cost or scope of the project exceeds, or is likely to exceed, the estimated construction contract price, or scope set forth in this Statement of Work, the A&E shall report this fact in writing to the Contracting Officer. Additionally, the A&E shall submit a control estimate and recommendations for reducing the project's cost and/or scope to within the established limits. Any proposed deviation from criteria must be approved prior to implementation.

- **Criteria**

  The project design shall conform to the following Air Force criteria:

  - AFM 86-2, Standard Facility Requirements
  - AFR 88-15, Criteria and Standards for Air Force Construction
  - AFM 88-29, Engineering Weather Data
  - AFR 91-36, Roof Management Program
  - Air Force Engineering Technical Letters (AF ETLs)
  - Air Force Construction Technical Letters (AF CTLs)
  - AFP 88-40, Sign Standards
  - Activity requirements (as possible)

- **Requirements And Management Plan (RAMP)**

  The RAMP provides project planning information such as base architectural guidelines; base standards and regulations for fire protection, safety, security, communications, systems operability and maintain-ability, energy conservation, and other base/site specific requirements; a Base Long Range Plan; etc. The RAMP is prepared at the project air base/major command level and will be provided to the A&E by PM.

- **Deliverables**

  - **Project Definition (PD) Documentation**

    The A&E produces the PD documentation as part of the PD process for Air Force projects. The PD documentation documents the project scope, budget, and design solution for approval by Congress and must be based upon a complete PD design analysis and developed design concepts. "Guidelines for Preparation of Project Engineering Documentation". The main elements of the PD documentation are the DD Form 1391, budget estimate summary sheet, project sketches, basis of design, and Parametric Cost Estimate (PCE). The PCE shall

include a Summary Sheet (indicating authorized scope, designed scope, authorized construction cost, designed construction cost, percentage over/under authorized cost, construction cost to 5-foot line, and construction cost outside 5-foot line), and AF Forms 1178, 1178A, and 1178B. The A&E shall provide a recommendation on the contracting strategy including milestones and assumptions.

- **Safety Hazards Analysis**

  Since there is not 35% the PDB Approx. 30% Submittal for Air Force projects, resolutions (elimination or control) for each hazard identified in the Hazards Analysis must be provided in a "Basis of Design" interim submittal prior to the 90% Submittal.

- **Specification**

  As part of the required edit of guide specifications, the A&E shall incorporate all pertinent Air Force criteria.

- **Pre-Project Definition Conference**

  The A&E will be required to participate in a Pre-Project Definition Conference at the project location to discuss and clarify the scope of this project. During this site visit, the A&E will be given any available Government furnished information and provided the opportunity to ask any questions regarding the design services. As a minimum, the Pre-Project Definition Conference will include the following activities:

  - Refine project scope and workplan
  - Schedule the field trip interviews
  - Interview designated user groups and key decision makers to establish project goals and direction
  - Arrange the work session logistics

- **Site Investigation / Charette**

  The A&E shall visit the site and gather all necessary site information, review User operations, and discuss User needs.

  In addition, the A&E shall conduct a Charette (intensive problem solving effort, including user interviews, completed in a specified time period) to determine and document all criteria and requirements. The A&E shall prepare a schematic floor plan showing all rooms and space requirements during the Charette.

- **Site Investigation / Detailed Data**

  The A&E shall visit the site and gather all necessary site information, review User operations, and discuss User needs. In addition, the A&E shall prepare the following data:

  - A written statement of the project goals
  - A comprehensive graphic analysis of the project site, the surrounding context and climatic information

- An analysis of existing facility which are directly impacted by the construction of a facility or the deployment of a system
- A compilation and analysis of all descriptive and statistical data regarding the proposed user group(s) that addresses function, activities, and major equipment to be accommodated
- Concepts/idea diagrams for implementing the goals and objectives of the project
- Summary statements of the unique aspects of the project design problem
- An action list of required follow-on items that must be pursued in order to produce a complete project definition package

- **Operability and Maintainability Report**

  The A&E shall prepare an Operability and Maintainability Report using Engineering Technical Letter (ETL) 88-4, "Reliability and Maintainability Design Checklist", dated 24 June 1989, as a guide. The report shall specifically address operability and maintainability in the following areas:

  - architectural elements and site work
  - electrical and mechanical system selections
  - roofing system selection
  - water wastewater systems
  - corrosion prevention and control

- **Command / Senior Level Briefing**

  The A&E shall develop as part of the Final PD submittal, professionally prepared presentation boards depicting design development in layman's non-technical terms and descriptions. The briefing will provide a discussion of the Final PD and parametric cost estimate documents. The briefing is considered an important part of ensuring user involvement, obtaining high level approval, and avoiding changes later in the design process. The A&E shall use senior level personnel to make the formal presentations. The briefing shall be held at the Base for the User, the Host and Requiring MAJCOM, Base representatives, AF Design Manager, and LANTNAVFACENGCOM.

- **Bird's-Eye View Architectural Renderings**

  The A&E shall provide bird-eye view architectural renderings which show the architectural style, massing, and compatibility with the established base urban design.

- **Model**

  The A&E shall provide a model of the proposed facility

- **Reliability and maintainability Checklist**

  The A&E shall complete the "Reliability and Maintainability Checklist" contained in ETL 88-4 in accordance with the requirements contained therein.

- **Building Finishes**

  For Air Force projects, the A&E shall submit Preliminary and Final Building Finishes Packages in accordance with the Milestone and Distribution Schedules in the Appendix "A".

  The Preliminary Building Finishes Package shall consist of (1) samples of all interior and exterior colors, materials, and finishes and (2) sketches or catalog cuts of built-in equipment, signage, graphics, and accessories. Such samples, sketches and catalog cuts shall be mounted or matted on 8-1/2" x 11" modules (with a maximum spread of 25-1/2" x 33" for foldouts) and be "keyed to the architectural finish schedules. Place the project title and base on the lower right side of each module. The module must support and anchor all samples. Anchor large or heavy samples with mechanical fasteners. Do not use "rubber cement" or other contact glues. Assemble the modules in a standard, three-ring binder. Identify each binder on the outside spine by FY, project title, project number (Air Force PDC), base and date. In addition, the A&E shall submit a brief narrative explaining the design objectives and choices of materials, finishes, colors, etc. in relation to the building and the site. (Coordinate the narrative with the "Architectural Compatibility Submittal" which may be required for the Schematic Submission. See the "Architectural Design Guide".) Additional requirements for the Building Finishes Package are outlined in "AFRCE Architectural Design Requirements" of 11 February 1986 (with revisions June 1986).

  For the Final Building Finishes Package the A&E shall revise and resubmit the Preliminary Building Finishes Package to reflect resolution of all government review comments.

- **Comprehensive Interior Design Package**

  The A&E shall submit Early Preliminary, Preliminary, Advanced Final, and Final Comprehensive Interior Design Packages in accordance with the Milestone and Distribution Schedules in the Appendix "A". The package shall be prepared in accordance with the requirements of "AFRCE Architectural Design Requirements" of 11 February 1986 (with revisions June 1986).

- **Design Info Pamphlet**

  The A&E shall submit a completed Design Information Pamphlet with the Final Submission. Format and requirements for the Design Information Pamphlet are contained in Attachment 22B, "Air Force Design Information Pamphlet".

- **Air Force Energy Report**

  The A&E shall submit a completed Air Force Energy Report with the Design Development Submission. Format and requirements for the Air Force Energy Report are contained in Attachment 22C, "Air Force Energy Report."

- ## Design/Build Procurement

  - **Definition**

    Design/Build projects require the Contractor to complete all or portions of the project design and construct the project in accordance with the approved construction documents. Project criteria and design requirements are defined in the solicitation documents approved by LANTNAVFACENGCOM.

  - **Solicitation Documents**

    Solicitation documents shall include administrative and performance based specifications supplemented with survey, geotechnical, environmental, demolition, and reference drawings as required. A LANTNAVFACENGCOM Design/Build Guide has been developed and will be posted on the homepage. Design/Build guide specification sections have been developed by LANTNAVFACENGCOM and will be made available to the to the A&E for editing and inclusion into the solicitation documents. These specialized sections include:

    - Section 01155, "Facility Program Requirements"
    - Section 01158, “Design/Build Criteria (Fitness Centers)”
    - Section 01159, “Design/Build Criteria (Bachelor Quarters)”
    - Section 01160, “Design Documents”
    - Section 01782, "Facility Technical Operating Manuals"
    - Section 01783, "Training Government Personnel"

    Drawings included as part of the contract documents for design/build projects should provide the bidders/proposers with complete information concerning the existing conditions at the site. Drawings should also convey any special design constraints associated with the site. Drawings should not be overly restrictive and should not "design" the facility. Typical drawings in a design/build contract are as follows:

    - Borings
    - Demolition drawings
    - Site Surveys (indicate points of connection of utilities)
    - Environmental drawings
    - Reference drawings

    Other Design/Build specification requirements include special editing and coordination of the following sections:

    - Section 00120, “Supplementary Instructions to Bidders” (for use with IFB projects)
    - Section 00201, "Instructions to Proposers" (for use with RFP projects)
    - Section 00202, “Evaluation Factors for Award” (for use with RFP projects)
    - Section 01110, "Summary of Work"
    - Section 01310, “Administrative Requirements”
    - Section 01330, “Submittal Procedures”
    - Section 01450, “Quality Control”

Generally, Design/Build projects are designed and constructed utilizing a "fast-track" methodology. In the preparation of Section 01160, "Design Documents", the A&E shall give special consideration to design review and approval procedures.

- **Design / Build Strategies**

  Design/Build projects may be awarded using various acquisition strategies, including:

  - Invitation for Bids (IFB)
  - Request for Proposals (RFP)
    - Two Phase Design/Build Contracts (Best Value Source Selection)
    - Design/Build Order Contracts (DBOC)
  - Request for Technical Proposals (RFTP - Two Step)

  The various strategies are discussed in the LANTNAVFACENGCOM Design/Build Guide, however, the preferred Design/Build acquisition method is the Two Phase RFP.

• Commission of Fine Arts Submittal

The Commission of Fine Arts Presentation Submittal is required to clearly demonstrate to the Commission the intent and quality of the project, and to obtain the acceptance of the Commission.

This is a separate submittal that should be submitted early in the design process. In most cases, it can be submitted concurrent with the 35% Design Development Submittal.

The Commission of Fine Arts Submittal consists of the following elements:

- **Drawings** – Provide one set of drawings, 24" x 36", mounted on presentation boards and rendered with appropriate color.
- **Project Data Report**
- **Environmental Assessment Statement**
- **Photographs of existing conditions** – Provide sufficient photographs to indicate the character of the existing nearby facilities, which have influence on the architectural design of the project.
- **Copies** – Provide three copies of all materials
- **Reduction** – Provide three sets of 8 ½" x 11" black and white reductions of the record copies.

• Medical Projects

- **Introduction**

  The Defense Medical Facilities Office (DMFO) is a division of the Office of the Assistant Secretary of Defense (Health Affairs), OASD (HA). DMFO is responsible for the planning, programming, managing financial resources, preparing and maintaining facility criteria, performing concept review, and 35% certification for facility design and

construction. "Medical Projects" include hospitals, medical and dental clinics, and other medical and dental treatment facilities.

- **Policy**

  As outlined in DoD Directive 6015.16, "Department of Defense Policies for Planning Fixed Military Health Facilities," April 15, 1996, the goal is to design and build efficient, economical, and safe facilities which sustain an effective combat force and support the medical wartime mission.

- **Reference Publications**

  Military Handbook 1191, "Medical Military Construction Program Facilities - Design and Construction Criteria," 24 May 1996, provides mandatory design and construction criteria for all DoD Medical Military Facilities. The requirements begin with the Design Authorization, through design and construction, Beneficial Occupancy, and Post-Occupancy evaluation.

- **Submittal Requirements**

  The medical design submittal process is a seven-step process. Each step or phase meets a particular need or focus for a particular group - program manager, client, technical reviewers. The phases are referred to as S-1, S-2, ...

  - **S-1 (5% Stage)**

    Usually referred to as Block diagrams. A&E provides two to three substantially different schemes. One of the schemes (or a variation is selected by claimant for further concept development and is subsequently presented to OASD (HA)/DMFO. The key items for S-1 submittal include:

    - Patient travel distances to high use service areas (i.e., Outpatient Records, Pharmacy, Outpatient Clinics, Laboratory, Radiology, Physical Therapy)
    - Departmental adjacencies (i.e., Radiology in close proximity to ER)
    - Ease of vertical transport
    - Separation of patient and service traffic
    - Access routes for patient, emergency and service vehicles
    - Positioning of building on site with respect to prevailing winds, solar and topographic conditions
    - Potentially dysfunctional departmental configurations
    - Runway clearance, noise, and hazardous ARC zones
    - Travel distance between outpatient clinics and ancillary services
    - Circulation patterns
    - Departmental control points
    - Current estimated construction (EC) compared with target ECC
    - Departmental and overall gross scope as compared to PFD
    - Potential for future expansion

  - **S-2 (10% Stage)**

    Review of submittal with user, site visit - Critical action: review departmental layouts with OICs/NCOICs. DMFO reviews and approves S-2. The key items for S-2 submittals include.

- Designed net square feet (nsf) or each room as compared to PFD
- Inter and intradepartmental adjacencies which impede functionality/ efficiency or work flow in rooms

- **S-3 (30% Stage)**

  The S-3 is the critical concept submittal. DMFO also reviews and approves this submittal. The key items for an S-3 submittal include:

  - Ensure all equipment and furnishings fit into rooms, such that workflow is efficient and unnecessary steps are eliminated.
  - Ensure work space and waiting space are not unduly encumbered by circulation space which is taken out of the programmed nsf of the room rather than being shown as additive square feet.
  - Check programmed nsf against design nsf and question significant variances, particularly in those spaces which show large circulation patterns.
  - Ensure pieces of equipment and furnishings that are shown for each room are actually needed in that space (validate with department OICs/NCOICs).
  - Using the PFD, validate that all rooms are accounted for in the design.
  - Check finish schedule and door schedules to ensure compliance with AFR 88 50, Table 3-2 and Table 3-3.
  - Ensure the Fire Protection Plan meets requirements of NFPA 101.
  - If project is an addition/alteration, ensure the proposed construction phasing plan is logical and minimizes disruption of services (Note: construction phasing plan must be presented to and approved by the Medical/Dental Executive Staff.
  - Ensure structural interior finishes are in patterns and colors that complement the architectural design and create a cheerful, non-threatening, therapeutic environment.
  - Ensure waste handling and transportation systems are logical, cost effective and meet local, state, and federal requirements.

- **S-4 (35% Stage, Finalized 30%)**

  As the final concept submittal, S-4 is a further development and clean up of S-3. A careful review of this submittal to ensure all comments from submittals 1 through 3 have been satisfactorily addressed is essential, as this is the concept submittal DMFO must approve prior to authorization to proceed to 100% design.

- **S-5 (60% Stage)**

  The first submittal of working drawings (a.k.a. preliminary working drawings, 60% or 65% design). The S-5 review is the most critical of all submittal reviews. By this point in the design process, design of the following building elements and systems should be fairly well established: building configuration and site placement; departmental and room layouts; mechanical, electrical, medical gas, fire protection, transportation, waste handling, communications, alarm and security systems, signage and wayfinding systems; and door, hardware and finish schedules.

  The key items for S-5 submittal include:

- Ensure specifications are detailed enough to clearly define critical salient characteristics of products, finishes, equipment.
- Ensure casework complies with MIL-C-20709D.
- Ensure proposed furniture and furnishings are appropriate to the intended function, enhance the approved interior design scheme, are readily obtainable (i.e., GSA contract), and costs are within budget.

- **S-6 (90% Stage)**

  The second submittal in working drawings (a.k.a. final working drawings, 90% or 95% design). This submittal should reflect a completion of the architectural, engineering, and interior design. The key items for S-6 include:

  - If project is an addition/alteration it is essential that the phasing plan is clear, logical, complete, and minimizes service disruption.

- **S-7 (Finals)**

  Also known as Finals or the "Backcheck" of S-6. Particular attention should also be paid to:

  - special provisions section of phasing plan
  - liquidated damages
  - government furnished equipment
  - quality control

• NATO Projects

- **General**

  In general NATO projects are prepared, submitted, reviewed and administered the same as US projects. LANTDIVINST 4000.2A provides detailed procedures and important references for designing a NATO funded project. Significant differences for NATO projects are:

  NATO Accounting Unit (NAU): NATO uses a national currency, the NAU, which is based upon an aggregate of the currencies of the member nations. It is adjusted quarterly.

  Type B Cost Estimate (TBCE): This document is produced as part of the 35% submittal. It is the document that is submitted to NATO and establishes scope and budget for the project. It includes a narrative description of the project, drawings and a detailed estimate. Detailed instruction for preparation of the TBCE will be provided as part of the Appendix A.

  Materials: All materials specified for a NATO Project must be produced in the NATO nations.

  Joint Formal Acceptance Inspection (JFAI): After construction completion NATO inspects the completed facility to ensure it has been built in accordance with the criteria and the TBCE. Preparation of the JFAI documents and representation at the inspection will be negotiated options to the A/E contract.

Most US projects are designed to budget. The scope required cannot exceed the established budget. NATO projects are the opposite. NATO requires design to a specific scope with the costs supported as long as they are reasonable. The budget for a NATO project is therefore not set until the 35% (TBCE) design stage.

- **Criteria**

  NATO projects are, with few exceptions, operational facilities. They are designed to austere standards known as Minimum Military Requirement (MMR). NATO design criteria files are maintained at LANTNAVFACENGCOM and the appropriate criteria will be provided with "Appendix A".

- ### National Capitol Planning Commission Submittal

  The National Capitol Planning Commission (NCPC) Submittal is required to clearly demonstrate to the Commission the intent and quality of the project and to obtain the acceptance of the Commission.

  This is a separate submittal that should be submitted early in the design process. It most cases, it can be submitted concurrent with the 35% Design Development Submittal.

  The National Capitol Planning Commission Submittal consists of the following elements:

  - **Drawings** – Provide one set of drawings, 24" X 36", mounted on presentation boards and rendered with appropriate color.
  - **Project data report**
  - **Environmental assessment statement**
  - **Photographs of existing conditions** – Provide sufficient photographs to indicate the character of the existing nearby facilities that have influence on the architectural design of the project.
  - **Copies** – Provide seven copies of all materials
  - **Reduction** – 8 ½" X 11" black and white reductions of the record copies

- ### NEXCOM Projects

  All guidance provided in this guide is applicable. Any special instructions will be provided in the Appendix A, Scope of Work.

Overseas Requirements

- ### General

  Engineering Field Activity Mediterranean (EFA MED), located in Naples, Italy has cognizance over projects throughout the European theater. EFA MED administers a broad range of design and construction services including award and administration of construction contracts. Where LANTNAVFACENGCOM assumes the design lead for a specific project, it does so in support of EFA MED. Upon completion of design, final plans

and specifications are forwarded to EFA MED, or their field office, for advertisement and award. In order to facilitate timely and direct A&E support to the field during construction, administration of the A&E contract and project management responsibilities are transferred to EFA MED for all post construction award services (PCAS). After administrative contracting officer (ACO) authority is transferred, EFA MED awards the pre-negotiated PCAS options and directs the A&E until the completion of construction. Additional A&E PCAS services are negotiated and awarded by EFA MED as needed.

- ## Translations

Plans and specifications are required to be prepared in dual language at a majority of our overseas locations. The A&E shall presume translation **is required unless the contract scope indicates otherwise**. Where dual language is required, the A&E will enlist the services of an in-country A&E consultant which is capable of understanding the technical requirements and accurately translating them such that they are clear and comprehendible to the local construction community. The consultant may be contracted to translate Government furnished studies, surveys, geotechnical reports, product specifications, host country requirements or other technical documents prepared in a foreign language and serve as an interpreter when meeting with local officials and contractors. Translation generally does not need to be started until the documents are substantially complete, however translations should be started early enough to be completed on or before the due date for the final submission.

- ## Host Nation Approval

Bilateral Agreements with certain countries require formal Host Nation Approval of our work during the design process. Host Nation Approval is required prior to our proceeding to construction. The submission is required for all projects that propose new inventory at the Activity. Projects that propose renovation or repair that alters the exterior appearance of an existing facility shall also be submitted for Host Nation Approval. Documentation preparation is required as part of the A&E contract and will be submitted concurrent with the PCE or 35% submittal. Unless directed otherwise by the contracted scope of services, the A&E shall not assume any formal presentation or involvement with the Host Nation Approval process beyond the scope outlined below. The countries are:

- Italy - U.S. and Italian text required.
- Iceland - U.S. text, no translation required.
- Greece - U.S. and Greek text required.

- ## Italy and Greece

  - **Host Nation Approval**

    The Host Nation Approval package consists of an illustrative statement and associated drawings that convey the full extents of the project. The package shall be bound in 8 1/2" x 11" format and organized as follows:

    - Cover sheet (Dual Language where applicable)
    - Illustrative Statement (English only)
    - Illustrative Statement (Foreign Language where applicable)
    - Drawings (Dual Language where applicable)

Illustrative statement of the project's intent: Illustrative statements will be prepared for signature by the Public Works Officer having cognizance over the station or project site. Paragraphs shall be organized as follows:

- Purpose of construction.
- Requirements to be met by this construction.
- Types of construction.
- Relationship of the proposed construction vis-à-vis the entire installation.
- Estimated Cost: Use a span of cost to avoid compromise of bid estimate; e.g. $1M - $2M, $3M - $5M etc.
- Environmental Statement: Provide statement "This project will not contribute to water or air pollution and will not adversely affect the ecology" or a statement of measures and criteria to mitigate environmentally sensitive features of the design.
- Particular Procedures: Statement of military or operational necessity for the project.

Drawings: Drawing size shall be 11" x 17," folded to 8 1/2" x 11" and bound with the illustrative statement. The drawings should incorporate the minimum amount of detail necessary to show the location, layout, function and extents of the project. Details, detail references, construction notes and extensive dimensioning are not desired. The following drawings are generally sufficient to document the scope of a project. Contact the Project Manager when the project scope warrants other drawings:

- Location Plan: Identify the project location relative to other significant facilities at the station.
- Demolition Plan: Provide a location plan for buildings to be demolished.
- Site Plan: Indicate site layout, primary utility connections and major site characteristics.
- Floor Plan: Indicate functional use of all spaces. Provide overall building dimensions.
- Elevations: Indicate exterior materials and significant features. Provide vertical dimensions.

- **Italian Structural Certification**

For projects in Italy, Plans and Specifications shall be certified by an Italian architect, engineer or technician, registered on the professional rolls of Italy, for compliance with Italian structural and technological codes. The certification shall be prepared in dual languages. Concurrent with the final submission, provide three (3) original Italian code compliance certification letters with the original stamp and signature on each letter which state the following:

- "HAVING REVIEWED THE DEFINITIVE AND DETAILED PROJECT No. (project number, project title, location), I DECLARE THAT I HAVE ASCERTAINED THAT THE STRUCTURES AND THE TECHNOLOGICAL SYSTEMS INCLUDED THEREIN COMPLY WITH THE APPLICABLE ITALIAN NORMS (LAW 1086/1971 ON THE STRUCTURES, SEISMIC LAWS, AND LAW 46/1990 ON THE SYSTEMS SAFETY).

  DATE SIGNATURE (Rolls registration stamp)

- **Italian Post - Construction Certifications**

  For projects in Italy, Host Nation Approval is granted with the condition that certain Post - Construction Certifications be submitted to the Government of Italy upon Completion of Construction. The specifications shall require the contractor to submit two copies of the following documents to the ROICC office:

  - Static Load Test Certificate in accordance with Law 1086 of 5 November 1971.
  - Certificate of compliance of Electrical Systems in accordance with CEI regulations and with DPR 547 of 27 April 1955 on Accident Prevention.
  - Certificate of compliance of Heating Systems above 100,000 Kcal/hr in accordance with Law 373 of 30 April 1976.
  - Fire Prevention compliance certificate in accordance with DM 16 February 1982 and DM 8 March 1985.
  - Passenger and Freight Elevators Test certificate in accordance with Law 1415 of 24 October 1942.
  - As-Built drawings of all facilities including Plans, Elevations, Sections, and layouts of Water, Electrical, Sewer, Heating, Ventilation and Air Conditioning (HVAC) systems.
  - All work to be in compliance with E.C. Law No. 46 of 5 March 1990 which provides for minimum standards of all technical systems in buildings.

• Iceland

- **Host Nation Approval**

  There is a mutual interest between the Icelandic Defense Force and the Government of Iceland (GOI) to jointly coordinate proposed development within the Agreed Area to ensure good planning, compatible land use, and mutual harmony. The Agreed Area Planning and Building Committee (PBC) handles planning and building matters within the Agreed Areas in cooperation with the Iceland Defense Department and in accordance with GOI regulation No. 75/15 March 1982.

- **Iceland PBC Submittal**

  Information is presented to the PBC in four stages.

  Stage 1:

  - Master plans, base exterior architecture plans, and presentations. These documents establish the framework for future design submissions and future development within the Agreed Area.
  - Comments on these plans will be provided to the Defense Force by the PBC normally within a month of receipt by the PBC.

Stage 2:

- Annual presentation of projects for which design is being initiated. Normally projects are presented two years prior to potential construction. Locations should be as shown in the master plan or differences explained.

- Due to the special concerns regarding development of Family Housing, Town Center and special areas of mutual agreement, an additional point of coordination will take place for these specific projects. Sub-area plans 1" = 100' (or approximately (1:1000)) will be submitted as early in the design process as practicable for PBC comment on site planning. These plans will show adjacent development, road system and how the building fits into the surrounding area. Alternative siting (if proposed) would be presented at this time along with preliminary exterior sketches of proposed building exterior. This sub-area plan will be submitted prior to the 35% design stage.

- Development should be consistent with the Base Exterior Architectural Plan (BEAP) or the differences explained.

- Comments on these plans will be provided to the Defense Force by the PBC normally within a month upon receipt by the PBC.

Stage 3: (35%)

- The Planning and Building Committee Submittal Document consists of design and detailed site location drawings forming the basis for design and building code concurrence. The content of these submissions varies with respect to the type of facility involved. Normally, this submission consists of a location drawing, general development plan, building interior and exterior plans (as defined hereinafter). Those construction projects that result in new buildings, major site development, or changes to exterior architecture or functional use of existing buildings are submitted to the PBC for coordination. Interior renovations of existing buildings, utilities, street repairs, and related projects are not normally submitted. The content and purpose of the coordination differ for operational and non-operational buildings.

- Where design detail is found to be insufficient, additional information can be provided upon request

- The Defense Force will provide environmental impact information upon request to the PBC.

Non-Operational Military Facilities

Those projects of a housing or personnel support nature are submitted to the PBC for conformance with Icelandic building codes. Coordination of siting, building exterior, and interior architecture by the PBC is accomplished at this time.

Operational Military Facilities

Projects related to direct or indirect support of NATO/non-NATO military operational facilities are coordinated for siting and appearance only. Projects are discussed informally with the Iceland Defense Department prior to coordination

with the PBC. Only general development and exterior building plans are submitted to Iceland Defense Department of coordination with PBC for operational facilities siting and exterior architecture.

Comments on these plans will be provided to the Defense Force by the PBC, normally within a month of receipt by the PBC.

Stage 4:

- One hundred percent design (construction drawings) for non-operational facilities are forwarded by IDF is requested by PBC.

- **Areas of Disagreement**

The Icelandic and U.S. Chairman of the Defense council will refer areas of disagreement regarding projects or matters that are not resolvable by the Defense Force and the PBC in their joint discussions, for joint resolution.

Format

The following format should normally be used for drawings submitted to the PBC.

- **Size of Drawings** (35% design submissions)

  All drawings for a particular project will be on the same size sheet.

- **Location Drawings** (35% design submissions)

  All submissions should include a location drawing showing the approved project site in relation to other facilities in the area. If located within the main base (cantonment) area, a scale of 1" = 400', (or approximately 1:5000) is desirable. Location on main Agreed Area shall also be shown. North arrow and a clear delineation of the project scope (area) should be included.

- **General Development Plan** (all 35% design submissions)

  On a drawing normally using a scale of 1" = 100' (or approximately 1:1000), show the proposed buildings relation to the adjacent road systems, grounds and other facilities to approximately 750 feet (250m) from either side of the new construction. The plan should show the access to the proposed project, in addition to sidewalks, playgrounds, parking lots, vegetation, and other items relating to the project site. The footprint (area) and the total floor area of the building shall be annotated on the drawing. North indicators and graphic scales shall be shown on all plans.

- **Exterior Architecture** (all 35% design submissions)

  The whole building exterior shall be shown so that it can be approved from an exterior architectural standpoint.

  The above format and procedures will form the basis for future coordination between the PBC and their Defense Force counterparts in coordination of PBC matters on the Agreed Area.

- **Interior Architectural Drawings** (non-operational buildings only)

  Building plans shall preferably be in 1/8" = 1' - 0" (or approximately 1:100) scale showing all floors, elevations and building sections fully dimensioned. Also show the intended use of each room and the net area. Show the interior arrangements on the drawings for kitchens, bathrooms, sleeping rooms, day rooms, living rooms, and dining areas. Also required is the location of fixed cabinets, closets, etc. For changes or additions to existing structures, provide architectural drawings with the proposed work drawn in heavy lines so they can be clearly distinguished from the existing structures.

- **Adjacent Buildings** (all 5% design submissions)

  If the building is in a continuous row of buildings, then show relationship to the next buildings. If the building is an addition, then show elevations of how the new work (building) will join with the existing structure.

- **Fences, etc.** (all 35% design submissions)

  Plans should include depictions of fences, signs and other similar exterior street furniture where applicable.

Post Design and Construction Services

"Please notify the coordinator of this section of the Professional Services Guide with any comments, concerns, or errors, by email: Construction Point of Contact."

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• Construction Product Line Leader's Comments

While this guide primarily deals with professional services that occur prior to contract award, it is important to stress the support required by the A&E community during the actual construction/renovation of facilities. First of all, it is important to note that our clients require that we deliver completed facilities in the least amount of time. In many cases, this requirement is met through use of delivery order contracts already in place, which enables is to significantly speed up the award process, but this also includes assuring that the contract time required to complete the scope of work is kept to the bare minimum.

In addition, we must be able to count on the A&E of record to provide timely review of submittals and shop drawings and to expeditiously develop solutions to conflicts/omissions in the plan and specifications, as well as to assist our field offices in developing solutions to unforeseen conditions that arise during construction.

As we all know, virtually all of our construction contracts involve changes during the construction process; and in many cases, these changes involve additional time. With our commitment to our clients to complete facilities in the minimal amount of time, it is imperative that we receive prompt A&E support to have a chance of achieving this goal. In this regard, changes to the contract documents must be initiated and approved by the Contracting Officer in the field office administering the work. We have found that through Partnering appropriate contractor, designer, customer and Government representatives can develop mutual goals and work as a team to ensure that a quality and timely facility is provided within ever tightening budget constraints.

In closing, we must all realize that with shrinking budgets, reduced resources and the commitment to our clients to provide a timely finished product that we have a difficult task. The A&E of record plays a key role in our success and must be prepared to provide timely and quality service after award of a construction contract.

• Communications

Direct communications with LANTOPS construction personnel is encouraged. If there is a particular question regarding requests for information, contact your LANTOPS Assistant Resident Officer in Charge of Construction to avoid potential delays.

• Construction Division Personnel

For a listing of the LANTOPS construction division staff and its field offices, including phone numbers and Email addresses, please see Construction Division in LANTDIV Webpage www.efdlant.navfac.navy.mil/lantops_05/home.htm

• Preconstruction Design Briefs

It may be beneficial to the ROICC to provide a brief to the ROICC team and/or customers and contractors. Contact ROICC staff for guidance on this.

Consultation During Construction

General

The A&E shall provide consultation services during the construction period as well as the design period. Such consultation may or may not be reimbursable as follows:

- **Non-Reimbursable Consultation:**

  Under paragraph 3(g) of Section 01011, "General Paragraphs", of the A&E Contract, the A&E shall promptly furnish consultation services without additional compensation. Such consultation typically occurs in the form of a Request for Information (RFI) from the Resident Officer In Charge of Construction (ROICC). Typically, RFIs include providing clarification of the intent of the drawings and specifications in response to questions which routinely arise during the course of construction and may result in preparation of amplifying drawings, specifications, amendments, change orders and cost estimates to correct errors, omissions, inconsistencies between drawings and specifications, conflicts in dimensions, lack of detail or poor design quality in the drawings and specifications. Amplifying drawings, specifications, amendments, change orders and cost estimates shall be prepared in accordance with the provisions and standards set forth in this A&E Guide. In such cases, the A&E shall assure through discussions with the ROICC the timing required for preparation of such documents to minimize delay to the construction. It is expected that the A&E will provide a response to an RFI not later than 3 working days after notification. Where the response to an RFI requires additional time, the A&E shall notify the ROICC as to the expected date of response.

- **Reimbursable Consultation:**

  In addition to non-reimbursable consultation, reimbursable A&E services may be required for specialized consultation with LANTNAVFACENGCOM and ROICC personnel either at the site of construction or in the A&E's office regarding matters of a nature not included under "General Paragraphs" of the A&E Contract. Such consultation includes:

  a. Consultation regarding unforeseen problems or questions during construction.

  b. Consultation on critical items during construction, including, but not limited to:

     1. Assisting the ROICC in final field checkout of basic mechanical and electrical systems.
     2. Witnessing final acceptance tests for HVAC systems.
     3. Witnessing and certifying construction contractor compliance with field test procedures for specialized mechanical, electrical and electronic systems designed for the project. Such services shall be performed by registered professional engineers and include the A&E's certification of compliance by the construction contractor with all specified test procedures, a critique of the data obtained and the stated or implied results of the tests performed.

  c. The preparation of all changes or additions to the drawings or specifications, amendments, change orders and cost estimates resulting from a change in scope, unforeseen conditions, or other modifications. Such drawings, specifications, amendments, change orders and cost estimates shall be prepared in accordance

with the provisions and standards set forth in this Professional Services Guide. In such cases, the A&E shall assure through discussions with the ROICC the timing required for preparation of such documents to minimize delay to the construction.

d. Evaluation of construction contractor proposed exceptions or variations to the requirements of the contract documents (beyond the scope of routine shop drawing submittal deviations).

e. Evaluation of construction contractor Value Engineering Change Proposals (VECP).

- ## Basis of Payment for Reimbursable Consultation

Payment for reimbursable consultation services, whether performed in the A&E's office or at the construction site, will be made on a cost per manday (8 hour) basis. The number and cost of reimbursable consultation mandays required both at the site and in the A&E's office will be discussed during fee negotiations, and the A&E Contract will stipulate a lump sum price for consultation reflecting these negotiations. This lump sum price is contingent upon the scale, type and complexity of construction as well as the amount of funds available. It should be noted that although the lump sum contracted price for consultation reflects the anticipated amount of consultation required, no minimum amount is guaranteed. Payment for consultation services will be made on an "as requested" basis.

To establish the A&E's cost per manday for office and site consultation services and to facilitate contract modifications for changes to the amount of A&E consultation required, the A&E shall submit with his fee proposal the following unit prices for negotiation:

a. Labor cost per day per person (average cost per person (RA or PE), including overhead and profit, for 8 hours).

b. Labor cost per person associated with travel time (round trip) from the A&E office to the site.

c. Travel cost per day (e.g., car operating costs or car rental) at the site.

d. Travel cost per trip in addition to above (e.g., plane fare) to the site.

e. Lodging cost per night per person at the site.

f. Per diem per day per person (e.g., meals) at the site.

- ## Changes to Negotiated/Contracted Reimbursable Consultation

If, during the course of the A&E contract, the Government wishes to change the number of contracted A&E reimbursable consultation mandays, an adjustment in contract price will be made in accordance with the negotiated unit pricing requested above and a contract modification will be issued.

- ## Requests for Consultation

Requests for A&E consultation during construction will be sent directly from the ROICC. In most cases, the A&E will initially receive such requests by telephone and, depending upon the circumstances, a follow-up letter. In the initial contract, the ROICC and A&E shall establish the reasons for the consultation request, determine whether the A&E's

consultation effort is reimbursable and, if so, an agreed upon price and schedule to perform the consultation services using the contract unit prices for office and site consultation, the ROICC shall issue a firm fixed price order for the required services keeping within the lump sum contracted price.

- ## Consultation Reports

  - **General**

    At the completion of each site consultation visit but prior to leaving the job site, the A&E shall submit to the ROICC a brief handwritten report of the services rendered and send one copy to the PM. Within 5 working days following the completion of each office consultation request, the A&E shall submit two copies of a final typed report to the ROICC and one copy to the PM. Each report shall include as a minimum:

    a. A cover letter indicating the A&E and Construction Contracts involved, the telephone conversation or letter requesting the site or office consultation, the order number of the consultation, and the A&E representatives who performed the services with their titles.

    b. A description of the services rendered.

    c. Persons contacted and those in attendance during the consultation. Include their telephone numbers.

    d. Problems encountered.

    e. Recommended solutions or proposed milestones for resolution.

  - **Evaluation of Contractor Proposed Exceptions or Variations to the Contract Documents**

    In addition to the general requirements, consultation reports on A&E evaluation of construction contractor proposed exceptions or variations to the contract documents shall address:

    a. Whether the proposed substitution is of equal, better, or lesser quality than the design requirements.

    b. If of lesser quality, the difference in value.

    c. If of equal or better quality, the advantages to the Government in accepting the substitution at no change in contract price.

  - **Evaluation of Construction Contractor Value Engineering Change Proposals (VECPs**)

    The purpose of a VECP is to achieve savings in cost by adjusting the design so as to permit more economical methods and materials of construction and still maintain the operational, functional and aesthetic quality of the facility. Note that a construction contractor VECP differs from a construction contractor proposed variation or exception to the contract documents in that a VECP must maintain at least the same level of quality as in the original design while a proposed variation

or exception could lower the quality of construction. Under the VECP program, the contractor and Government share in the savings resulting from acceptable proposals while a full credit (deduct) in the construction contract price is taken for approved variations or exceptions which are of lesser quality than the original design.

In addition to the general requirements, consultation reports on A&E evaluation of VECPs shall include:

a. The advantages and disadvantages of the VECP.

b. Economic analysis and justification for recommending approval or rejection of the VECP.

In order to avoid tacit delays to construction, Government processing time for VECPs is held to 21 calendar days from the date the ROICC receives the VECP package from the contractor. Accordingly, the A&E shall complete and forward consultation reports on VECPs to the ROICC and PM within 5 working days from the time of receipt. When the VECP is of the nature that the response requires additional time, the A&E shall notify the ROICC as to the expected date of responses. In addition, the A&E shall also forward one copy of the VECP consultation report to LANTNAVFACENGCOM Code C147.

• Design/Build Contracts

• General

Design/Build contract is awarded the ROICC is responsible for managing/administrating both the design and construction of that particular project. The A&E needs to understand that after contract award, Administrative Contracting Office, ACO, authority is passed to the ROICC who is responsible for the execution of both the design and construction phases of a Design/Build contract.

Post-award contract administration for Design/Build projects is similar to what takes place on a Design/Bid/Build project. All technical submittals, except those normally approved by LANTDIV C14 or their design agent, will be approved by the contractor’s designer and/or CQC representative.

• Design Field Support

• General

Unless Supervision and Inspection Services are negotiated and contracted as a Contract Phase, the A&E has no field construction responsibilities. The ROICC is responsible for field administration and the Government's quality assurance program relative to the construction contractor's quality control program. However, to assist the ROICC in this endeavor, the A&E shall at the Government's option, provide Design Field Support.

Design Field Support consists of periodic site visits by teams of A&E personnel to observe and report on particular phases of construction or problems, ascertain the progress of construction and to assist the ROICC in quality assurance measures. The purpose of the team visits is to ascertain whether work-in-place satisfactorily meets the intent of the

design and to keep the A&E aware of the status and quality of construction. As a general rule, design field support is required for critical design elements or phases of the construction work.

The number of visits and A&E team composition will be negotiated on a case by case basis. Contributing factors include the size and complexity of the project, qualifications of ROICC personnel at the site and location of the project. The request for a site visit and the preferred A&E team composition will be determined by the ROICC. Only the design disciplines directly involved with that particular critical design element should make site visits. Visits will be coordinated and scheduled by the ROICC to allow the A&E and Government to get maximum benefit from each trip.

- **Partnering**

LANTOPS and its customers are committed to forming a cohesive partnership with the contractor and the design agent. This partnership strives to draw on the strengths of each organization in an effort to achieve a quality project done right the first time, within budget and on schedule. The A&E is expected to fully participate in the partnering process. The number of partnering sessions and A&E team composition will be negotiated on a case by case basis. Contributing factors include the size and complexity of the project, qualifications of ROICC personnel at the site and location of the project. The request for a partnering session and the preferred A&E team composition will be determined by the ROICC. Only the design disciplines directly involved in the current phase of work should attend the session.

- **A&E Tasks and Responsibilities for Design Field Support**

A&E participants in the construction progress reviews shall be alert to and document the presence of perceived deficiencies in the construction work and shall note potential coordination problems which may be avoidable. The construction progress review teams shall not conduct tests of equipment or systems and shall not disturb the work performed by the construction contractor in any manner that might cause the construction contractor to have to perform additional work. The A&E shall provide construction contract drawings and specifications for team participants to use during the construction progress reviews.

At the conclusion of each team review, which shall take no more than six hours, the A&E shall informally advise the ROICC of any observed deficiencies in construction or coordination problems. A handwritten report of all observed deficiencies and potential coordination problems shall be prepared at the site immediately following the team reviews and given to the ROICC. One additional copy of each report shall be forwarded to the PM. The handwritten report shall identify the construction contract, the A&E firm and Government participants in the team review and their specific disciplines. Each observed construction deficiency shall be addressed separately in the report by citing the specific construction contract requirement (specification paragraph or drawing detail) which pertains to the observed deficiency and stating specifically how the observed construction differs from that required in the construction contract documents or from that intended by the designer. The A&E shall also comment on the advisability of corrective measures to be taken in such instances. The A&E shall also comment on observed coordination problems such as, for example, where installation of mechanical work and either structural work or architectural features may encounter problems due to improper layout or poor usage of available space within a ceiling cavity or utility corridor. In addition, although the A&E is not responsible contractually for construction safety, serious life safety hazards observed shall be included in the report. The post occupancy inspection report will include lessons learned in providing a quality facility that meets the

user's expectations as well as identifying warranty related problems and latent defects and potential maintenance problems. Navy criteria deficiencies shall also be noted.

• Shop Drawings/Submittal Review

At the Government's option, checking of shop drawings/submittals and other data submitted by the construction contractor is an A&E's responsibility. The A&E shall provide and use the shop drawing approval stamp shown in Figure 8.1 to process shop drawing submittals.

NOTE: Shop drawings/submittals shall include all submittal descriptions (SD) as listed in Section 01300, "Submittals" of the construction contract specifications.

Generally, all CONUS and select overseas projects utilize formal quality control procedures. Under these procedures, the contractor's quality control manager approves for construction all shop drawings and submittals except those specifically designated in the project specification for approval by the Contracting Officer.

Accurate, timely review of ALL submittals including operation and maintenance data packages, is an A&E's responsibility. The sub-section entitled "Shop Drawing Review Procedures" outlines the procedure for handling submittals on all projects, including both those where the contractor's quality control manager is the approving authority and those where the Government (LANTNAVFACENGCOM or A&E firm) is the approving authority.

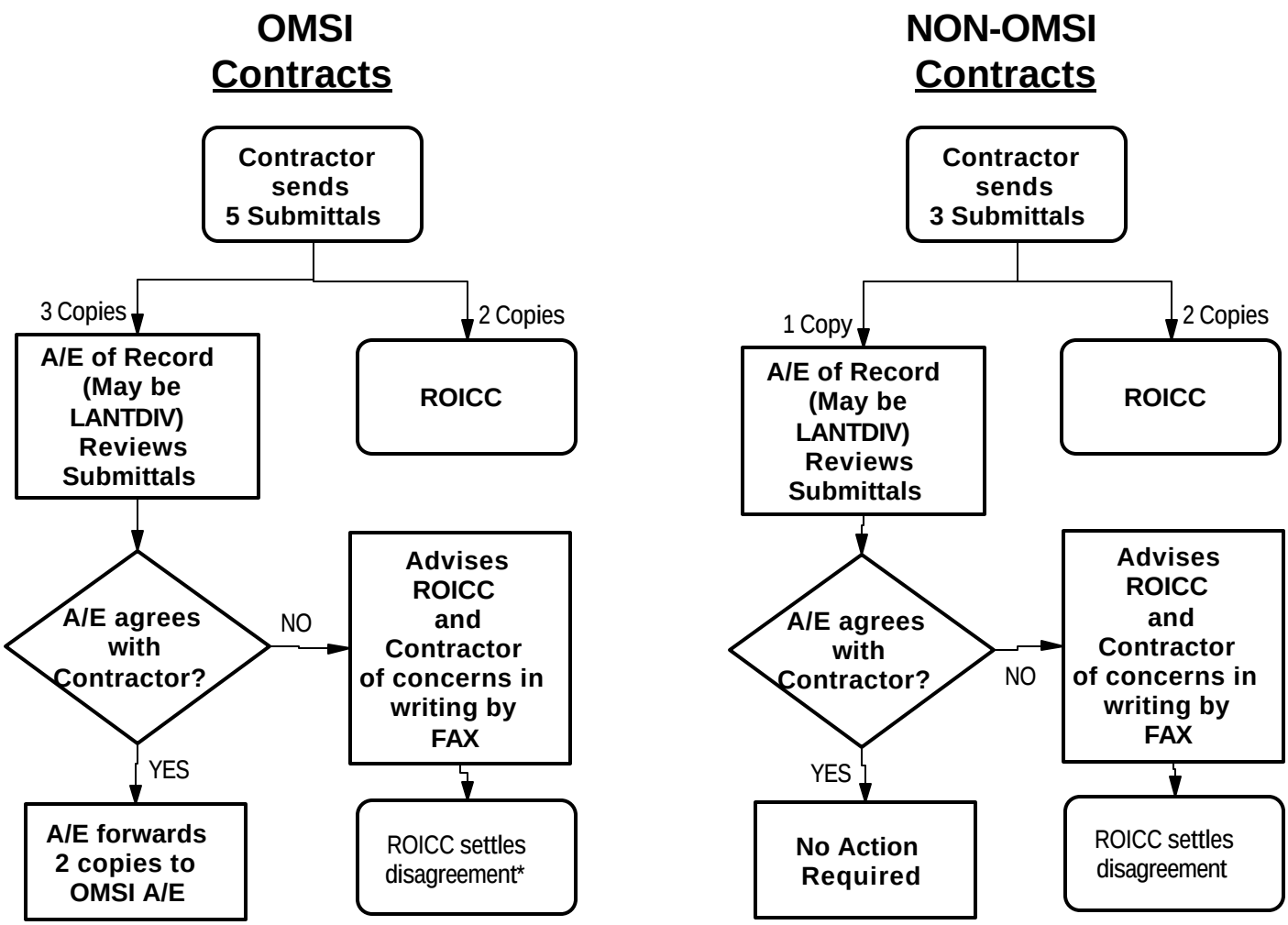
From the A&E view point there is no difference in the review of submittals whether the approving authority is the Government or the contractor's quality control manager. Since the contractor's quality control manager is approving the majority of the submittals for construction, then distributing approved copies to the A&E and others, these items must be reviewed promptly. It is the A&E's responsibility to immediately advise the ROICC of problems/discrepancies encountered in contractor approved submittals.

• Stateside and Overseas Contracts

Submittals shall be submitted and distributed in accordance with the flow charts on the next 12 pages:

Stateside Submittal Processes

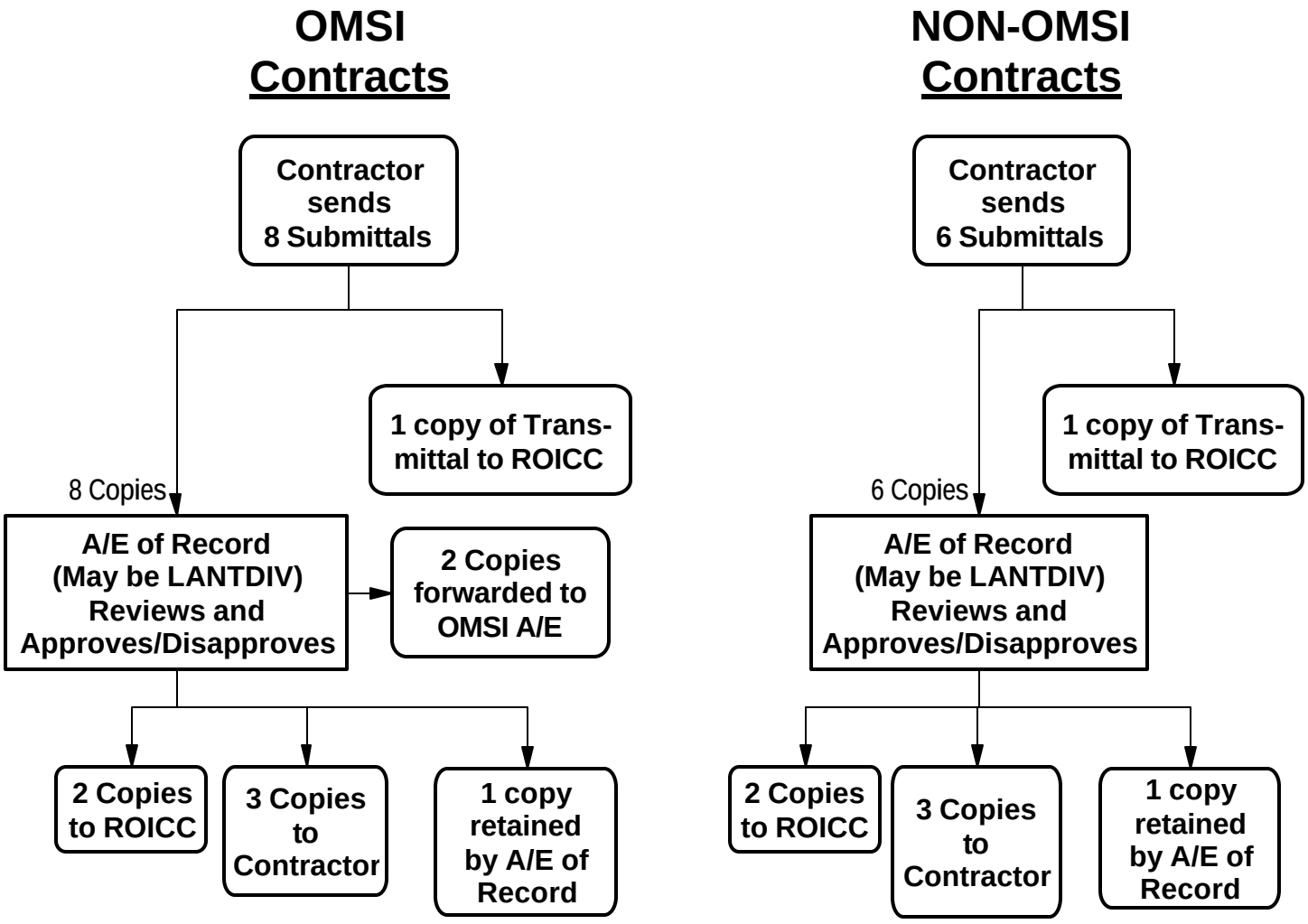
A. APPROVAL BY CONTRACTOR



*ROICC to make sure OMSI A/E receives approved submittal

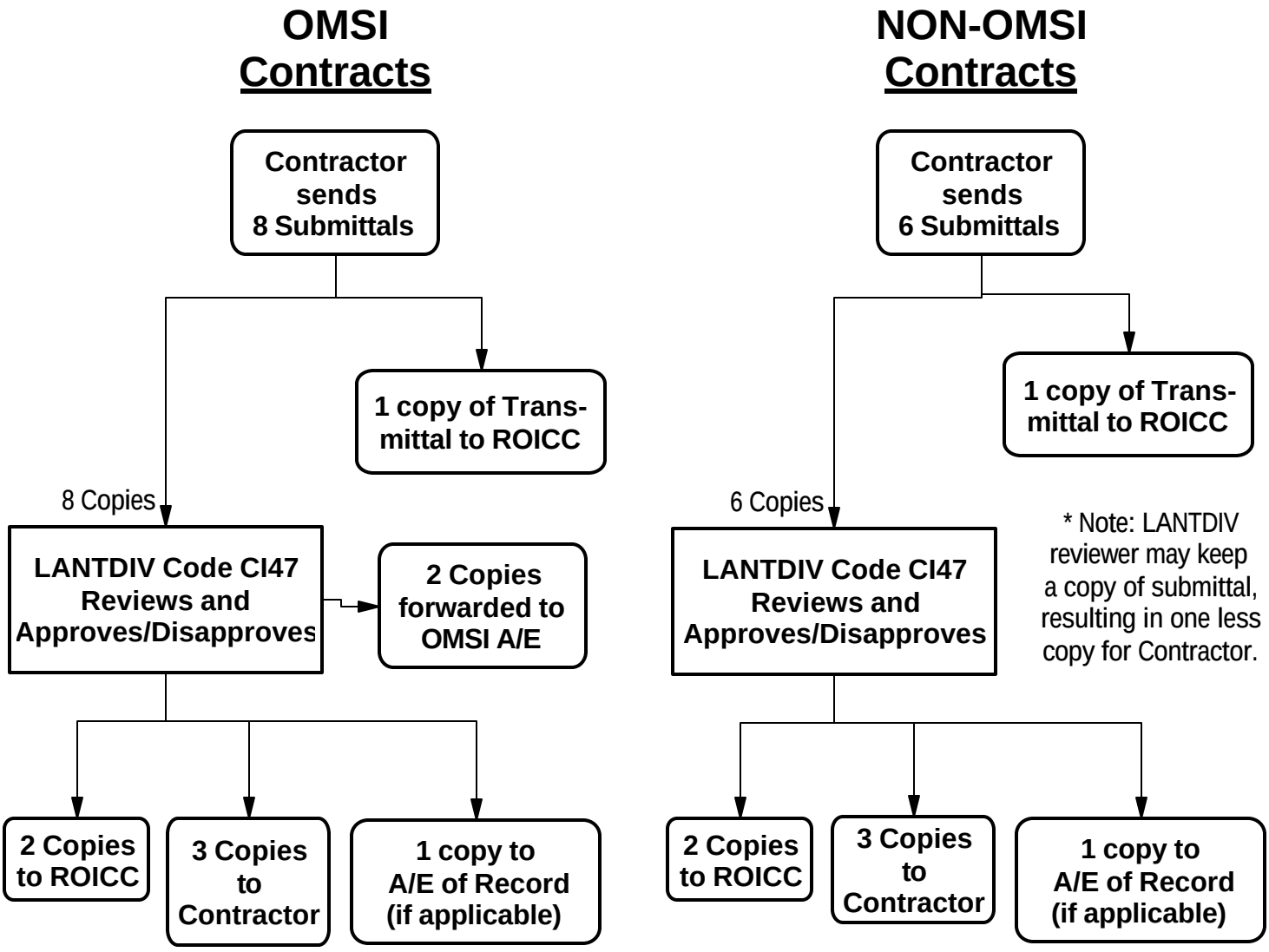
Stateside Submittal Processes

B. APPROVAL BY DESIGNER (A/E)



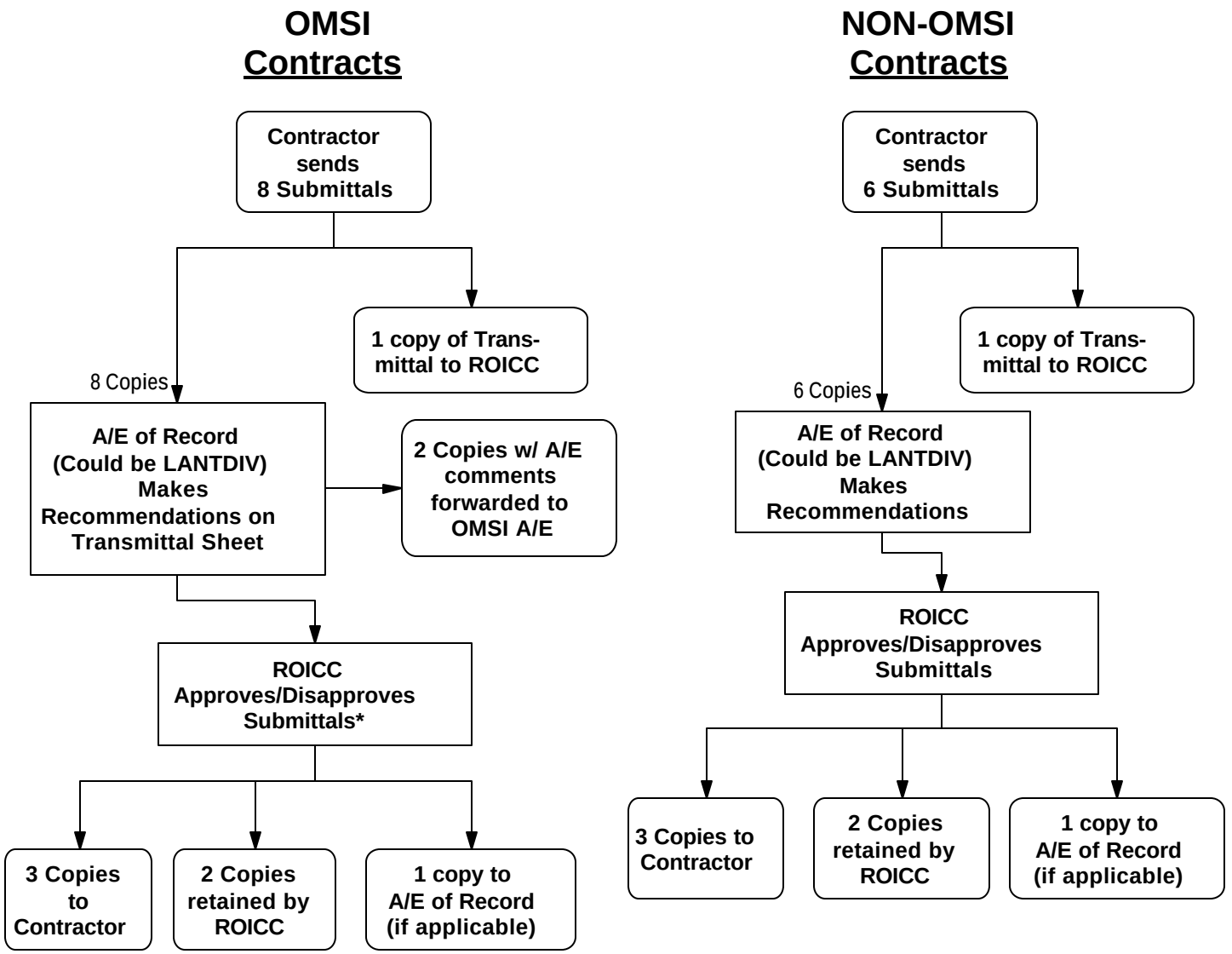
Stateside Submittal Processes

C. LANTDIV TECHNICAL APPROVALS



Stateside Submittal Processes

D. DEVIATION APPROVALS

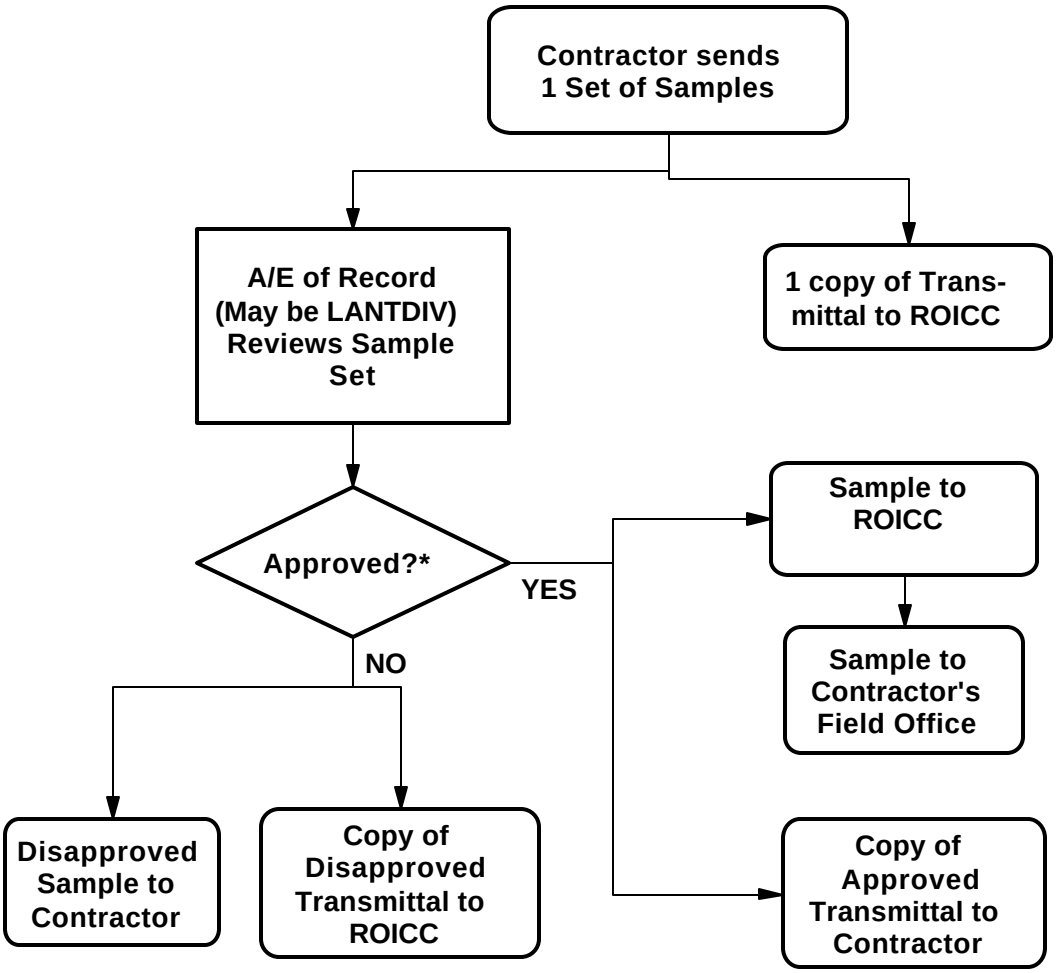


*ROICC to make sure OMSI A/E receives approved deviation information

Stateside Submittal Processes

E. SAMPLES APPROVALS

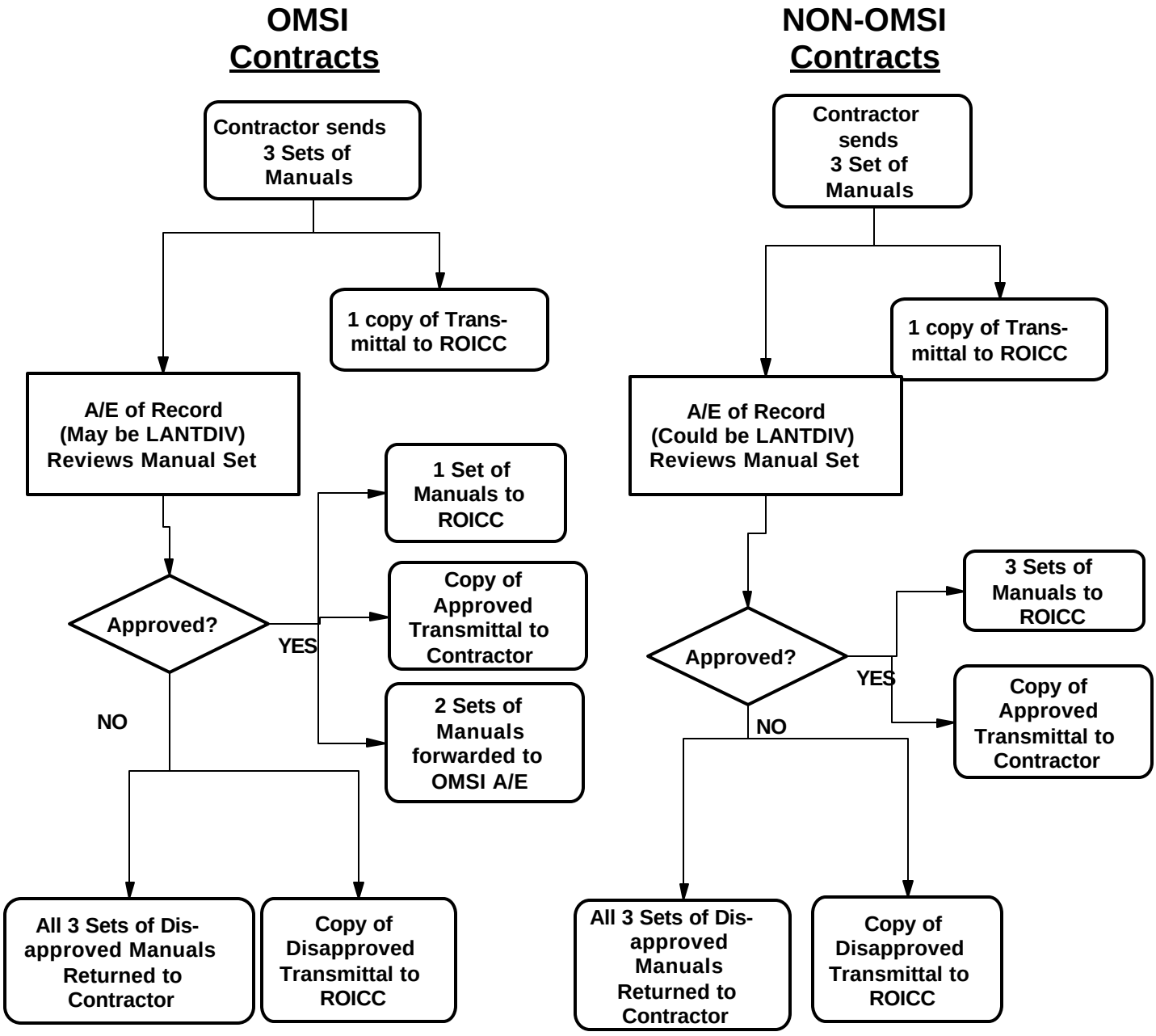
OMSI and NON-OMSI
Contracts



*ROICC to coordinate review and approval with
LANTDIV and/or Customer as necessary

Stateside Submittal Processes

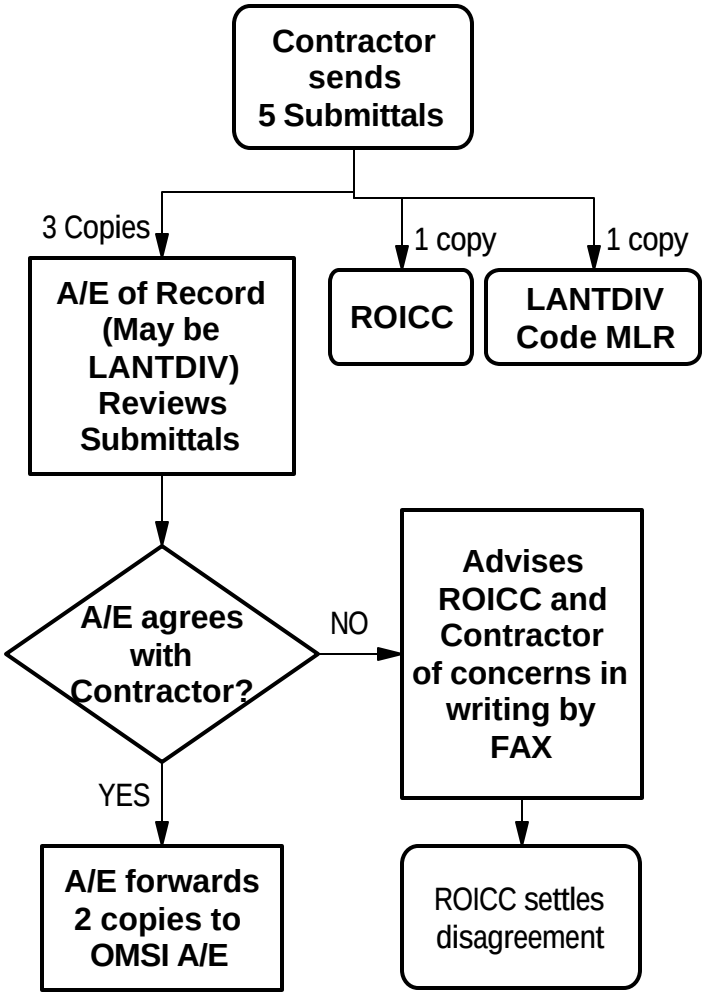
F. OPERATION & MAINTENANCE MANUALS (Includes "Data Packages")



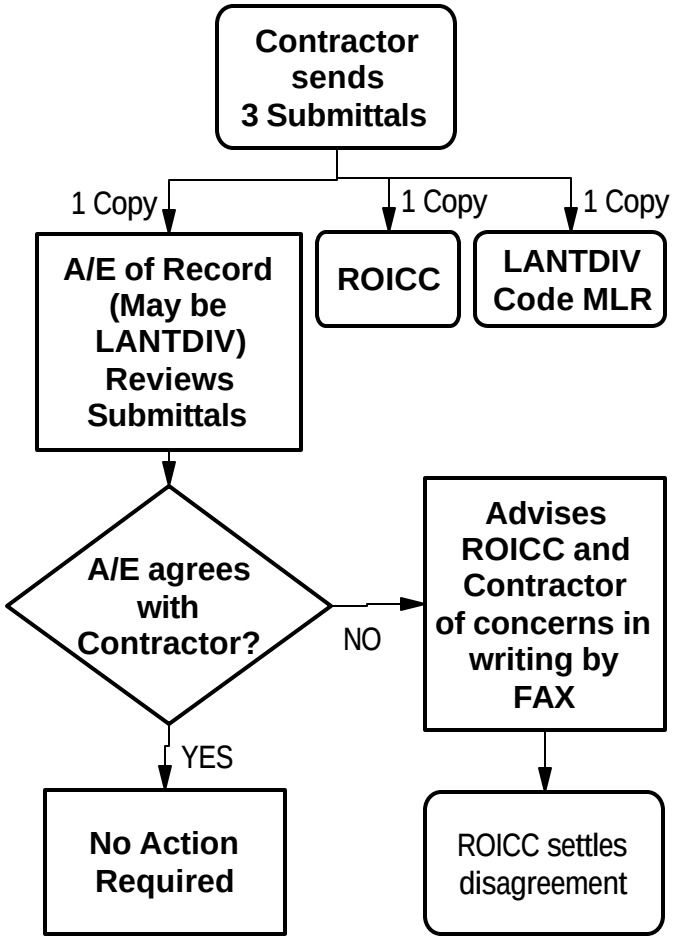
Overseas Submittal Processes

A. APPROVAL BY CONTRACTOR

OMSI Contracts

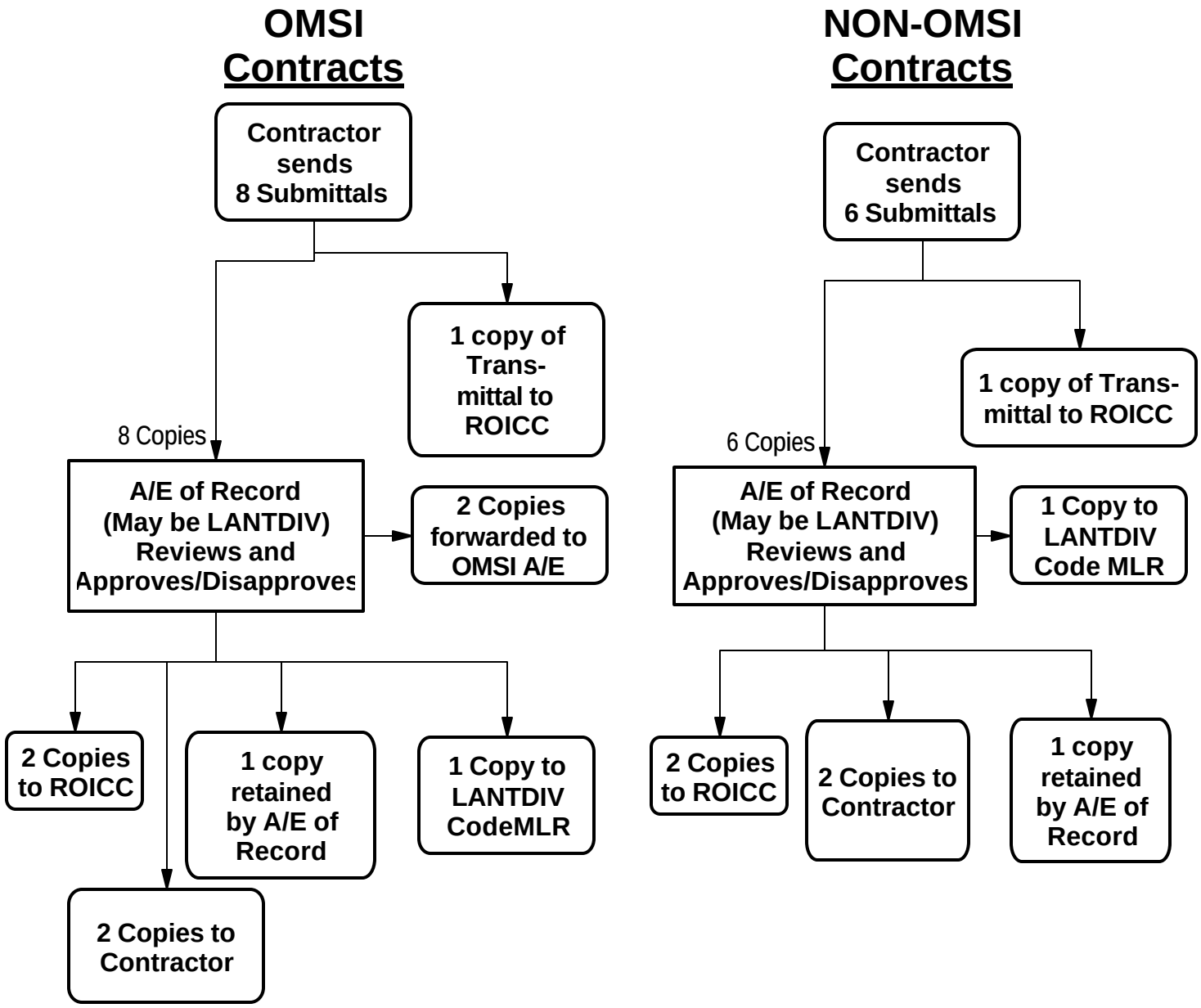


NON-OMSI Contracts



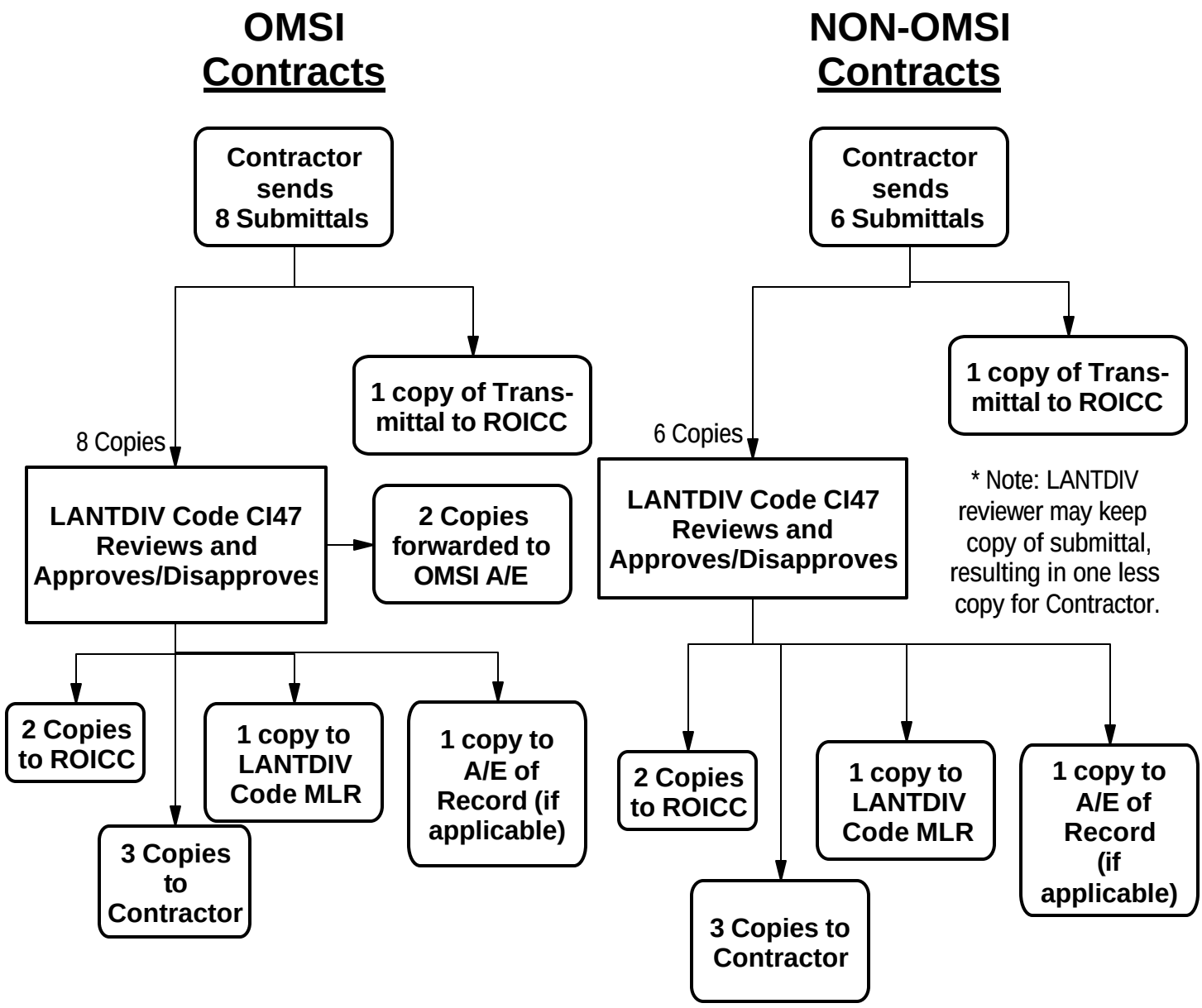
Overseas Submittal Processes

B. APPROVAL BY A/E



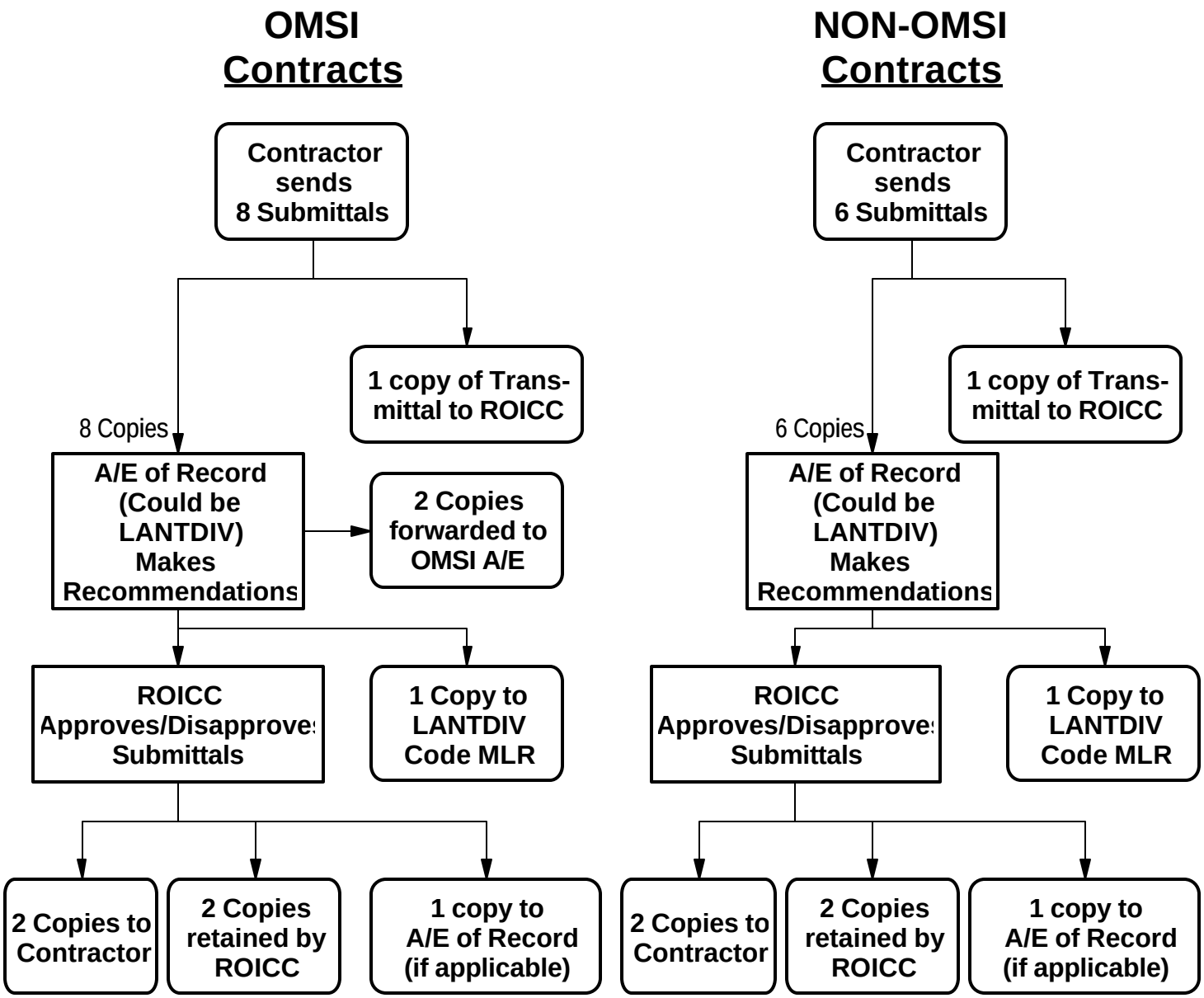
Overseas Submittal Processes

C. LANTDIV TECHNICAL APPROVALS



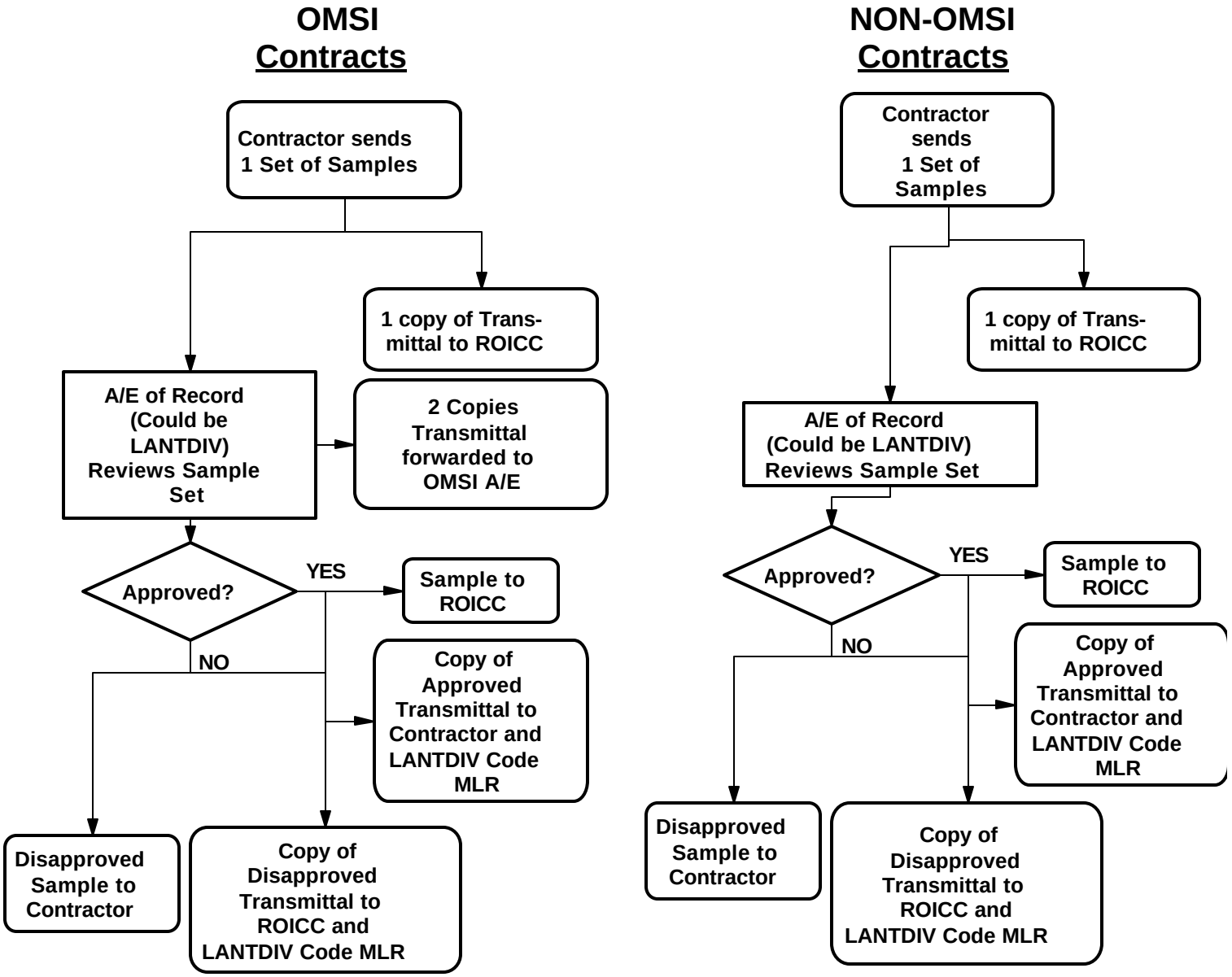
Overseas Submittal Processes

D. DEVIATION APPROVALS



Overseas Submittal Processes

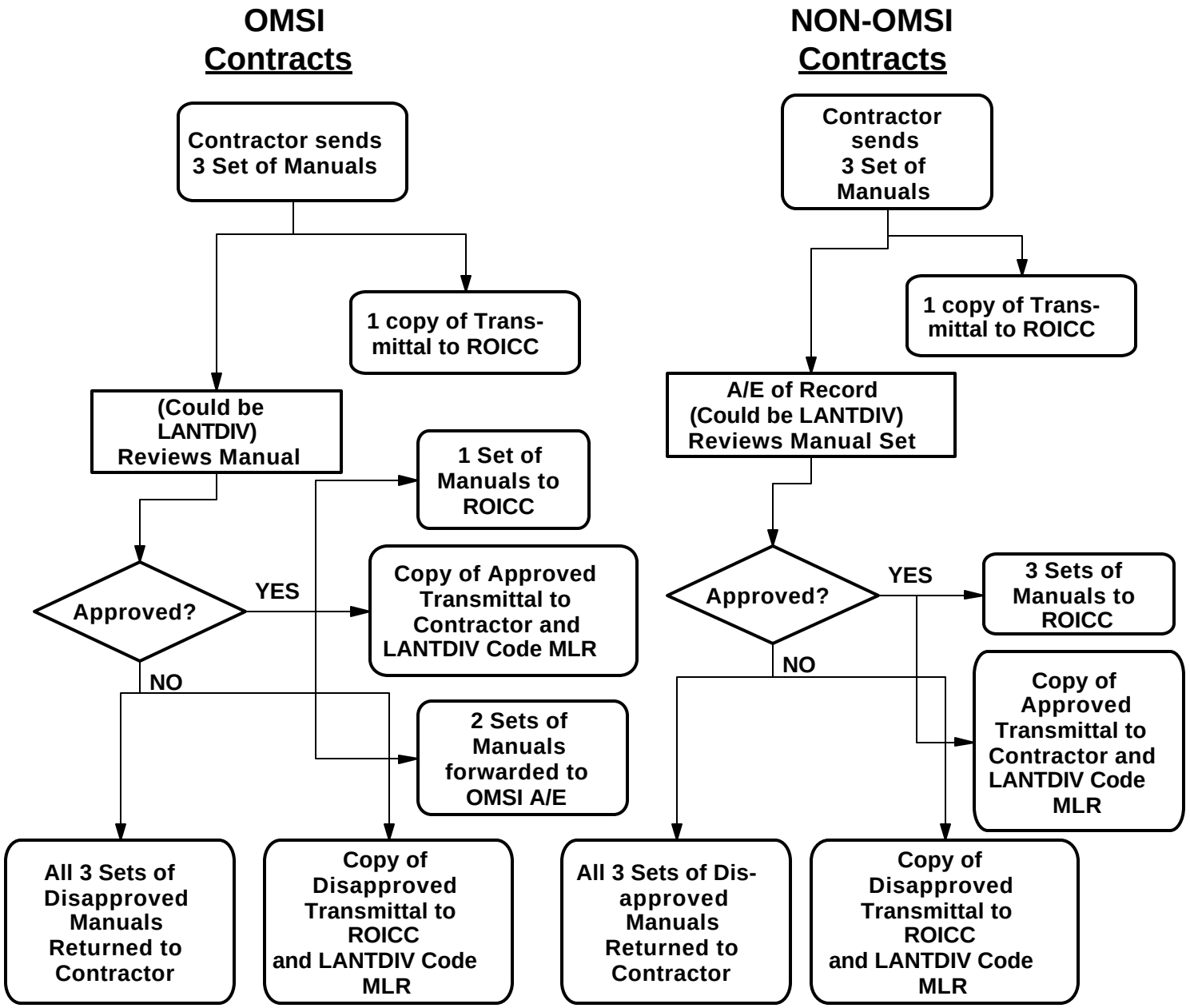
E. SAMPLES APPROVALS



NOTE: Flow diagram is the same

Overseas Submittal Processes

F. OPERATION & MAINTENANCE MANUALS (Includes "Data Packages")



- **Miscellaneous Submittal Review Aspects**

  When a submittal must be revised by the A&E due to such reasons as changed Government requirements or correction of design deficiency, it must be forwarded to this Command (Code MLR) with an explanation for the new requirements and the estimated change in contract price for the contractor to comply with the new requirements.

  Only certifications which state that the item submitted complies with the contract requirements are acceptable. A statement that the item submitted is equal to or better than the specified item will not suffice.

  When a submittal cannot be reviewed within two weeks, the ROICC must be advised of the estimated date of review completion.

  The contractor has also been requested to submit three copies of his submittal register to your office. It is requested that you review this register to assure that all submittals required by the contract specifications have been included. If the register is acceptable, two copies should be forwarded to the ROICC and one copy to LANTNAVFACENGCOM Code MLR. If the register is not complete, it should be returned to the contractor, with comments, for correction. One copy of the register and comments should be forwarded to the ROICC.

• Record Drawings

See Post Design Services, As-Built Record Drawings, Chapter 5.

Housing Services

"Please notify the coordinator of this section of the AE Guide with any comments, concerns, or errors, by email: Housing Point of Contact."

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Housing Services

• Division Director's Comments

Although methods for designing Navy housing have changed over the years, the goals are still the same; providing Navy personnel and their families quality neighborhoods, residences and services to meet their needs; and enhance morale, retention, and the operational readiness of the Navy. With this in mind, all designs performed for housing will consider the customers' needs and desires, while including cost effective and low maintenance products. The referenced manuals provide guidelines for achieving these goals and meeting the needs of military families and bachelors.

• Communications

We encourage direct communication with the *Public Works Support Division's* responsible *engineer* throughout the A/E project. Any questions concerning the process, the product, or any particular review comment should be addressed at the earliest possible time to the *Engineer in Charge (EIC) or Navy Technical Representative (NTR)* assigned to the project. This will avoid unnecessary re-submittals and will save time, money and aggravation. For a listing of the Housing phone numbers see either our Point of Contact or Products and Services page.

• Family Housing

• Navy Neighborhoods of Excellence Brochure

"Navy Neighborhoods of Excellence" is a concept that constitutes our vision of Family housing. It displays standards for facilities, neighborhoods, and customer services and provides practical guidelines on how to implement and achieve a Quality Housing program.

• NAVFACINST 11101.85H

Family Housing Design & Construction Criteria cited in this instruction are intended to set minimum standards for design quality. This instruction is currently under revision.

• Revitalization Checklist

A checklist of necessary design review components which assists the project team members in the design review process.

• Core/Above Core Renovation Criteria

A listing of criteria that should be considered essential (Core) for inclusion and those which are considered "nice to haves" (Above Core). Consideration should be given to location and the amount of funding which is available for the proposed project.

• Bachelor Housing

• Neighborhoods of Excellence Brochure

This brochure is prepared to help Commanding Officers develop a command planning strategy to achieve and maintain quality bachelor housing. In the brochure, we show Commanding Officers the following characteristics: A planning strategy to achieve quality standards; Standards for customer service; and Standards for bachelor housing neighborhoods.

• Design Manual 1036A

The MILHDBK 1036A provides the basic criteria to plan, program, and design Navy bachelor housing. It presents guidance for development of bachelor housing, taking into account local program operations and requirements, as well as the Office of the Secretary of Defense Construction Standards. The new metric standard module for the Navy will be 46 SM. This includes two 11 SM bedrooms/living rooms, with closets, bath, and kitchenettes. The criteria applies to new bachelor housing and major bachelor housing renovations, and is applicable to new facilities and renovation projects in the Continental United States and overseas.

Public Works Support Services

"Please notify the coordinator of this section of the AE Guide with any comments, concerns, or errors, by email: Public Works Support Point of Contact."

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Public Works Support Services

• Division Director's Comments

Welcome to the Public Works Support Division's section of the LANTNAVFACENGCOM Professional Services Guide. Throughout the last several decades we, along with most divisions of LANTNAVFACENGCOM, have supplemented our technical workforce with the use of Professional A&E firms. This practice continues today and will continue in the future. This guide was assembled to provide our A&E firms an easy to use source of scopes, guidance, and criteria.

Because the Navy's Installation Engineering work is dynamic, the nature of our A&E requirements changes frequently. A&E's should anticipate additions and deletions to the scopes included here today. I will communicate all anticipated growth areas or new initiatives here in my comments. For example, in the next several months, we are anticipating the development of a High Tower inspection Guide to supplement our High Tower Inspection program. Please review our home page for more information on who we are, what we do, and where we are located.

• Communications

We encourage direct communication with the Public Works Support Division's responsible engineer throughout the A&E project. Any questions concerning the process, the product, or any particular review comment should be addressed at the earliest possible time to the Engineer in Charge (EIC) or Navy Technical Representative (NTR) assigned to the project. This will avoid unnecessary re-submittals and will save time, money and aggravation. For a listing of the Public Works Support Division's phone numbers see either our Point of Contact or Products and Services page.

• Facilities Management and Engineering

• Facilities Condition Assessment (FCA) Program

The Facility Condition Assessment program guide is used to perform multi-disciplined facility inspections and engineering assessments for the development of prioritized work packages and multi-year maintenance action plans. The work packages and action plans will be used in executing an activity facility management program. The product is fully digital and is produced in hard copy and CD Format.

• Operation and Maintenance Support Information (OMSI)

Through the design A-E or through an IQ contract, these A-E services provide OMSI manuals (technical operating manuals) about 30 days before construction completion. The manuals contain detailed, as-built information that describes the efficient, economical and safe operation, maintenance, and repair of the facility. The manuals also provide needed information for much faster preparation of a Performance Work Statement (PWS) for a Facility Support Contract (FSC).

Our Generic Scope of Work for OMSI is modified by the Government EIC to suit a particular project by selecting the specific systems to be covered in Part II of the manual, Primary Systems. Negotiation of the OMSI as a PCAS item may be done as a Priced

Option or as a Phase. OMSI negotiation and award will be completed soon after construction award (within 60 to 90 days or sooner) because contractor submittals will begin to be received and are needed to prepare the OMSI manuals. A sample OMSI guide is available from the Government EIC.

When preparing the construction specifications, A-E's must insure that NAVFAC Guide Specification Section 01781, Operation and Maintenance Data is included. All technical sections requiring the "SD-19" submittals for Operation and Maintenance Manuals must properly reference Section 01781 and specify a Data Package (1 through 5) for the particular product, component, piece of equipment or package type system. For unique specifications, the A-E is required to select a Data Package that is appropriate to the Operation and Maintenance (O&M) requirements for that item and include the reference to Section 01781 under the SD-19 submittal.

For design-build projects, the OMSI scope of work will be included in the construction specification as Section 01782, which will be prepared by the Government. In this case, the construction contractor's A-E will prepare the OMSI. In design-build projects, OMSI must always be included as a separate contract line item.

For budget purposes, OMSI cost may be estimated using MIL-HDBK-1010B, Cost Engineering, Policy and Procedures. OMSI is a Post Construction Award Service (PCAS) item so it must be included in the project construction cost.

- ## Cathodic Protection Services

This IQ A-E contract provides the technical expertise for an in-depth inspection and assessment of corrosion problems and the preparation if design documentation to mitigate corrosion. Surveys identify corrosion problems, determine their cause, evaluate damage to facilities and the applicability of corrosion control. The A&E also records all data necessary to prepare 1391 documentation or may prepare the design documentation for the installation of corrosion control systems. Corrosion control studies review facilities for protective coatings, cathodic protection, corrosion resistant materials, chemical corrosion inhibitors, and design to resist corrosion. Facilities inspected for corrosion control include natural gas pipelines, POL distribution and storage systems, steam distribution systems, compressed air systems, elevated water tanks, piers and other structures experiencing damage due to corrosion. The policy and responsibility for corrosion control at naval activities is outlined in LANTNAVFACENGCOMINST 11014.9, Corrosion Control of Shore Facilities of 21 March 1995.

Facility Support Contracts

Solicitation Package Development

The work to develop an FSC solicitation package typically includes the preparation of the Performance Work Statement (PWS), contract clauses, "Boiler Plate" items, Government Cost Estimate (GCE), Quality Assurance (QA) Plan (QAP) and QA Staffing requirement. The PWS is prepared using the most current version of the NAVFAC Uniform Contract. The solicitation shall include all of the required items specified in a particular Scope of Work (SOW) and further defined by the customer. The SOW may include, but is not limited to, operations, maintenance, Preventive Maintenance (PM) and repair services for all building systems and equipment as well as custodial, grounds maintenance, pest control, guards, refuse collection/disposal, utility plants, utility distribution systems, and transportation service. The GCE is usually prepared in a Government furnished Excel spreadsheet format. The GCE shall include the information necessary to support the estimated value for each item of work. The QA Plan is a plan of how the Government will inspect the FSC contractor's work. This plan will be developed following the latest NAVFAC guidance and format. The QA Staffing requirement shall be based on the QAP and establishes the work years necessary for the Government surveillance effort for the FSC.

Management Studies to Develop Most Efficient Organization (MEO)

Engineering services may be required to provide on-site participation in the management study and development of a Most Efficient Organization (MEO) of activities selected for cost comparison in response to OMB Circular A-76. This effort will typically involve review and analysis of work requirements and work procedures with recommendations for improvement. These recommendations should include but not be limited to workflow procedures, organization of work force, required skills and materials/equipment.

Utilities Engineering

Civil Engineering Services

Engineering Services under this contract provide for inspection, testing, evaluation and analysis of water supply, treatment and distribution systems and wastewater treatment and collection systems. The services include: water and wastewater utility master plans; water and wastewater treatment plant capacity evaluations; sewer system inflow/infiltration studies; field verification tests, and condition assessment of facilities components; computer based hydraulic analysis of water distribution systems; water audits, leak detection surveys and preparation of water conservation plans; life cycle cost analyses for recommending repair supporting expansion, modification and repair of water and wastewater systems.

Mechanical Engineering Services

Mechanical Engineering services include: conducting energy audits for building, utility plants and systems, mechanical utility master plans; calculating Life Cycle Cost

economics and development of energy projects; determining distribution system efficiencies; investigating existing equipment condition and capacity, preparing reports with corrective recommendations for plants and distribution systems; performing metallurgical testing of boiler components and plant auxiliaries; analyzing and testing boiler feed water and condensed steam and related equipment to verify compliance with Navy ship clean steam requirements; performing a detailed plant life extension study; verifying and digitizing mechanical utility maps; evaluation of code and safety compliance.

- **Electrical Engineering Services**

  Electrical Engineering Services include: conducting building and utility systems energy audits; preparation of studies resulting from investigating, analyzing and metering electrical systems and generating plants; calculating Life Cycle Cost economics; investigating existing equipment condition and capacity; preparing reports with corrective recommendations; performing load studies, determining distribution system efficiencies, updating, verifying and digitizing electrical system drawings and maps, developing system and plant equipment inventory list; calculate distribution systems load flow and voltage drop; determine protective device settings; evaluation of code and safety compliance.

Environmental Support Services

"Please notify the coordinator of this section of the Professional Services Guide with any comments, concerns, or errors, by email: Environmental Point of Contact*."*

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ENVIRONMENTAL SUPPORT SERVICES

Architect-Engineer (A-E) Contracts

ENVIRONMENTAL COMPLIANCE SUPPORT SERVICES

- Air Programs
- Wastewaters
    - National Pollutant Discharge Elimination System (NPDES), Planning
    - Wastewater Design Services
    - Stormwater Pollution Prevention Planning
- Potable Water
    - Safe Drinking Water Act
- Hazardous, Solid, Regulated Medical, and Toxic Waste
    - Hazardous Waste (RCRA Subtitle C or Final Governing Standards)
    - Solid Waste (RCRA Subtitle D or Final Governing Standards)
    - Regulated Medical/Infectious Waste
    - Toxic Substance Control Act (ToSCA or Final Governing Standards)
- Oil and Hazardous Substance Contingency Planning
- Asbestos Inventory

ENVIRONMENTAL RESTORATION SUPPORT SERVICE

- Investigation and designs for CERCLA and RCRA site restoration
    - Comprehensive Long-term Environmental Action Navy contract
        - CLEAN Manual (Contact Ms. Lee Anne Rapp (USE EMAIL ALIAS)
- Construction for CERCLA and RCRA site cleanups (including Underground Storage Tank programs)
    - Remedial Action Contract, structured as "cost plus award fee"
        - RAC Guide - Contact Mr. Greg Hedley (USE EMAIL ALIAS)
- Investigations and designs for remediation of Underground Storage Tanks (RCRA Subtitle I)
    - Indefinite Quantity contracts are utilized to conduct much of this work. For more information contact Mr. Keith Simmons (USE EMAIL ALIAS)
- Construction for remediation of Underground Storage Tanks
    - Remedial Action Contract, structured as "cost plus award fee"
        - RAC Guide

OTHER ENVIRONMENTAL SUPPORT SERVICES

- Environmental support for real estate acquisition and disposal
    - Phase I & II Hazardous, Radiological, and Toxic Waste Surveys
    - Environmental Baseline Surveys
    - Environmental Suitability Studies and other support

Planning and Related Services

"Please notify the coordinator of this section of the AE Guide with any comments, concerns, or errors, by email: Planning Point of Contact*."*

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Planning and Related Services

• Planning Division Director's Comments

Planning is the starting point for all projects that ultimately move into design and construction. Products that provide planning solutions, guidance and tools for our planning clients need to provide sound executable recommendations. The wide variety of planning products that can be accomplished through partnership with a consultant need to meet the following two measures:

- Quality of the product
- Adherence to schedule

The quality of the products should be based on planning and engineering expertise in the area being studied. Recommendations need to be based on precepts that ensure the solution can be executed. Adhering to the schedule is key to being able to provide our clients the information they need to make decisions that will impact future funding and execution of facility solutions.

The planning products being produced today include the need to capture and display the solution in an electronic format. The use of the Internet and other technologies is key to providing timely information to the Navy. The creation of electronic tools to support the planning business process is a need expressed by our clients. These non-traditional areas of planning are foundational to the planning solutions of the future.

• Introduction

This section of the AE guide will provide information that will assist consultants in preparing Planning Division deliverables. The information that is available is posted on the Planning Division web page on the Atlantic Division web site. As additional guidance is posted it will be available on that site. Links to the existing information are provided on this page and they will be updated as changes and additions are made.

• Communications

- **Planning Division Points of Contact**
  http://www.efdlant.navfac.navy.mil/Lantops_20/pointsof_20.htm

- # Planning Considerations

  - **Requirements for Mapping - Tri-Service Spatial Data Standards**
    http://tsc.wes.army.mil

  - **NavFac P-80 Facility Planning Criteria for Navy and Marine Corps Shore Installations**
    http://www.efdlant.navfac.navy.mil/Lantops_20/P-80/p80.htm

  - **NavFac P-80.1**

  - **NavFac P-80.2**

  - **NavFac P-80.3**

  - **NavFac P-72 Department of the Navy Facility Category Codes**
    http://www.nsi.navfac.navy.mil/p72/p72toc.htm

  - **OpNav Inst 11010.20F Facilities Project Manual**
    http://www.nsi.navfac.navy.mil/pdf/navin20F.pdf

  - **NavFac Inst 11010.44E Shore Facilities Planning Manual**
    http://www.nsi.navfac.navy.mil/pdf/1101044E.pdf

- # Overseas Requirements
  - **Final Governing Standards - Italy**
  - **Final Governing Standards - Spain**
  - **Final Governing Standards - Greece**
  - **Final Governing Standards - Iceland**
  - **Final Governing Standards - Guantanamo Bay**
  - **Final Governing Standards - Bahrain**

Real Estate Services

"Please notify the coordinator of this section of the AE Guide with any comments, concerns, or errors, by email: Real Estate Point of Contact*."*

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You may use Email to contact the following persons:

Director of Real Estate, at: Director_RE@efdlant.navfac.navy.mil

Real Estate Web-Master, at: WebMaster_RE@efdlant.navfac.navy.mil

LANTDIV Web-Master, at: Webmaster@efdlant.navfac.navy.mil

You may also link to the following web pages for further information:

Real Estate Home Page: http://www.efdlant.navfac.navy.mil/Lantops_24/Real_Estate_home.htm

LANTDIV Home Page: http://www.efdlant.navfac.navy.mil/

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• Real Estate Contracting

Real Estate Contracting is involved when the Navy needs to:

- acquire the real property ownership or use of land, buildings, or other structures;
- dispose of the Navy's real property ownership or use of land, buildings, or other structures; or
- manage the Navy's real property while allowing the temporary use of Navy's land, buildings, or other structures by others (either governmental or private interests)

Warranted Real Estate Contracting Officers within the performance of their official duties perform these contracting actions. Real Estate Contracting is performed in a competitive environment under specific authorities. A general description of the types of solicitations for Navy Real Estate contracts is contained in the section titled: "Award of Types of Real Estate Contracts".

To support Real Estate contracting actions, other service contracts are often required. These include physical land survey contracts, title (ownership) evidence contracts, and appraisal contracts. These are explained in the section below, titled: "Contracts for Services".

For more information regarding Real Estate contracts, please connect to the Real Estate Home Page at http://www.efdlant.navfac.navy.mil/Lantops_24/Real_Estate_home.htm. On that Internet site, you can also find the Real Estate Director's welcome statement, more detailed Navy Real Estate information, and links to many associated Internet pages.

For more information on available contract solicitations for Real Estate, related services and the other types of LANTDIV contracts, please connect to the LANTDIV Solicitations Page at http://www.efdlant.navfac.navy.mil/ebs.

• Award of Types of Real Estate Contracts

Advertisement for available Navy property, or the pursuit of additional property for Navy use, is generally contracted through a competitive process via:

• Request For Proposals

Requests proposals for the use of Navy property: published publicly, proposals are submitted to the Navy, evaluated, competitive range established, and award made on the basis of cost/price and other evaluated factors stated in the Request for Proposals.

• Solicitation For Offers

Usually used when the Navy wants to obtain leased commercial/private space. Sent to prospective lessors, provides clear statement for Government's minimum requirements, identifies evaluation and award factors. Basis for award is normally lowest price, however, can also be based on value and/or quality factors stated in the solicitation.

• Invitation For Bids

When the use of Navy property is easily quantified. Price is the only evaluation factor. Bids are publicly opened, evaluated without discussion, award is made to the highest priced bid for the use of the Navy's property to a responsive, responsible bidder.

Contracts for Services

Real Estate contracting often requires contracted services to support the real estate contract. Real Estate contracting addresses the Navy's use of someone else's real property (in-grant); the use of Navy real property by someone else (out-grant); and, the acquisition and disposal of ownership interests in land and/or structures.

These related contracts can include physical survey (land boundary/topographic), title evidence and appraisal services. These related services are generally one of the following types:

Survey Contracts

Required for all acquisition and disposal documents that require title evidence and very specific descriptions of physical property boundaries.

a. Are not contracted directly by Real Estate: usually obtained from contractors holding open-end contracts with the Atlantic Division, Naval Facilities Engineering Command (Refer to the Contractual Requirements and Design and Related Services sections of this document.) For specific requirements concerning Topographic Surveys, see the Civil Engineering Design Guide.

b. Scope of Work: There are specific scopes of work for each project requiring a survey.

c. Minimum Standards for Land Survey Drawings and Legal Descriptions accompany each Scope of Work:
   1. Must be done in accordance with the current minimum standards for ALTA/ACSM Land Title Surveys.
   2. Narrative Legal Descriptions are required.
   3. Monuments and State Plane coordinates must be identified.
   4. Surveyor responsible for incorporating locality requirements for recordation.
   5. Surveys are submitted to the Navy Real Estate Office for review.

Title Evidence Contracts

Required for many types of acquisition projects (i.e. fee simple, easements). These are contracted directly by Real Estate by first accessing the Department of Justice approved list of Attorneys, Abstracters and Title Companies for the State or Commonwealth in which the property is located.

a. Award based on a Request for Proposals.

b. Title Company or affiliated attorney must be Department of Justice approved.

Appraisal Contracts

Appraisals required for leases, licenses, easements, disposals, and acquisitions. Appraisers desiring to perform work for the Navy must submit a Resume and Demonstration Appraisal to the attention of the "Senior Staff Appraiser."

a. Staff or Contractor supplied.

b. Award based on a Request for Proposals.

c. Must be Department of Justice approved.

d. Must be State Certified within the State or Commonwealth where the appraisal assignment occurs.

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